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ABSTRACT

This report, first in a series of seven, addressed the question, "What events disrupt classroom instruction and what are the most effective techniques teachers use to cope with these distractions?" This report describes the events which occurred in the evolution of the research study. The major sections are: (1) selection of the participants and orientation activities; (2) identification of the research question; (3) development of the research design; (4) data collection activities; (5) intervention sessions; (6) data reduction activities; (7) report writing; and (8) tentative conclusions. Appended are the initial workscope, the preliminary classification system, coping technique classification system, and the final workscope. (JD)

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COPING WITH CLASSROOM DISTRACTIONS

THE EVOLUTION OF THE STUDY

Perspective

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Report IR&DT 79-1

This study was prepared and written by the San Diego IR&DT team. No authorship is claimed by FWL.

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MAR 7 1980

PREFACE

The case study herewithin is a description of the major activities and events which occurred during the development (evolution) of the study "Coping with Classroom Distractions." It was decided by the San Diego Interactive Research and Development on Teaching Team (IR & DT) that this document was needed. The team believed that many events which were important to the process of this collaborative research effort might otherwise have gone unreported. Since a description of the process of IR & DT is perhaps as important as the findings of the distraction study, the team wished to have its perspective of the study's evolution reported.

Even though the San Diego IR & DT team was initially composed of four teachers, one researcher, and one trainer/developer, the "Coping with Classroom Distractions" study could not have been completed without the assistance, guidance, and encouragement of a more extensive team. It is with a sincere debt of gratitude that the initial IR & DT team acknowledges the assistance and support provided by the many persons who contributed to this investigation.

Further acknowledgement needs to be given to the administration of the San Diego Unified School District, both central office and site level, for cooperating so fully in such an unconventional study. And, of course, thanks are extended to the children in the observed classrooms for behaving in a natural manner and not becoming "distracted from distracting" by the presence of the study's observers. Without the children's cooperation (e.g., continuing to contribute their regular distractions to the classroom scenario), the investigation would have been muted.

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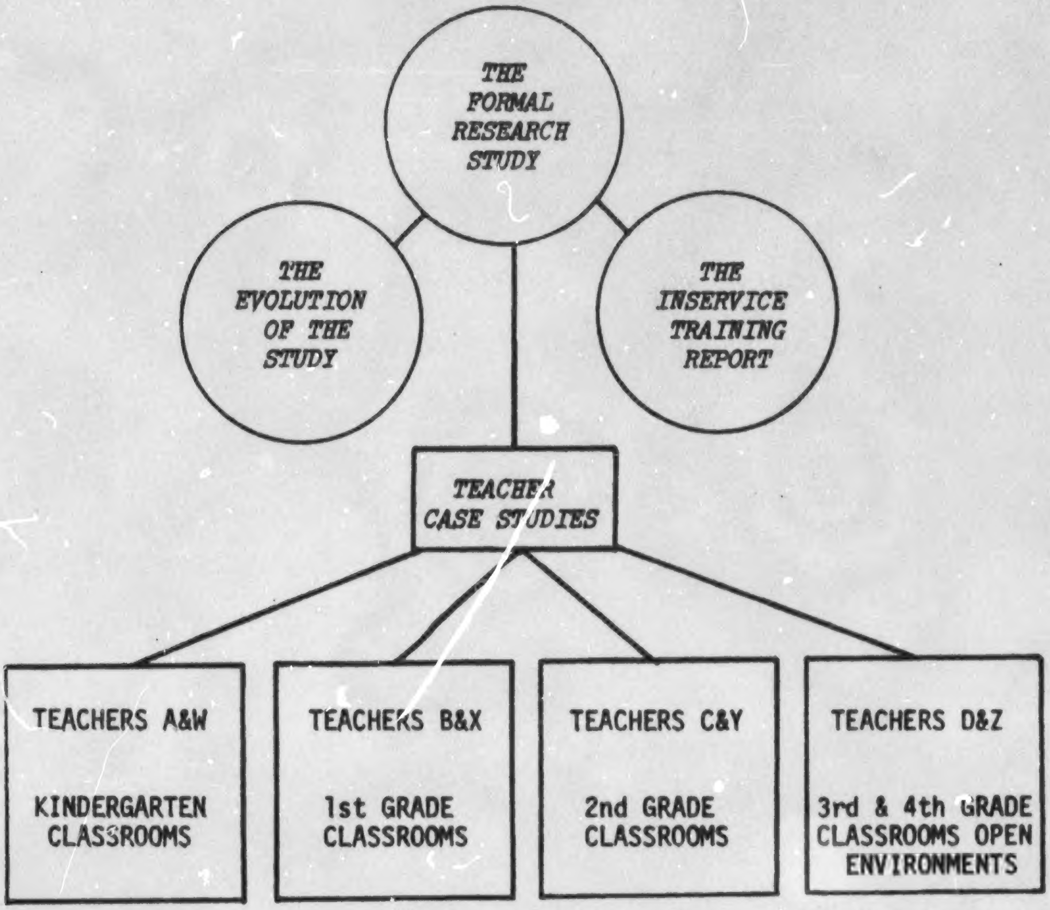
INTRODUCTION

PERSPECTIVE OF THIS STUDY

The case study which follows is one of a set of studies describing research conducted by the San Diego Interactive Research & Development on Teacher (IR & DT) Team. The cluster of studies which presents the IR & DT team's findings regarding *Classroom Distractions* is graphically illustrated below.


THE FORMAL RESEARCH STUDY
THE EVOLUTION OF THE STUDY
THE INSERVICE TRAINING REPORT
TEACHER CASE STUDIES
TEACHERS A&W KINDERGARTEN CLASSROOMS
TEACHERS B&X 1st GRADE CLASSROOMS
TEACHERS C&Y 2nd GRADE CLASSROOMS
TEACHERS D&Z 3rd & 4th GRADE CLASSROOMS OPEN ENVIRONMENTS

The Formal Research Study provides a formal presentation of a typical research report (i.e., purpose of study, review of literature, methodology, findings, conclusions and recommendations).

The Evolution of the Study provides a chronological development of the evolution of the study from the initial identification of the problem to the write-ups of the findings (from the IR & DT team's perspective).

The Inservice Training Report details the activities undertaken in an inservice class offered by the trainer/developer and a preliminary evaluation of the impact of the class upon the participants.

The Teacher Case Studies (4) provide discussions of findings, conclusions, and insights from the perspective of the teachers who participated in the study. Detailed context descriptions of the instructional environments and teaching styles should permit readers to identify and peruse those teacher case studies which seem most relevant. Hence, the disparate needs and interests of a variety of readers will be satisfied.

In an attempt to minimize the redundancy of describing certain procedures, most operational activities (e.g., the selection and training of the classroom observers) and methodological procedures (e.g., data collection methods) have been omitted or described briefly in the teacher case studies. The reader seeking to review detailed descriptions of the study's methodology should review *The Formal Research Study* or this study, *The Evolution of the Study*.

This study will describe the evolution of the project from the initial contact of the study participants (the four teachers, the trainer/developer, and the researcher) until the final write-ups of the study's findings. The major intent of this document is to provide background information to the reader seeking details of the development and progress of the study. Although the "researcher" of the IR & DT team had primary responsibility for writing this case study, extensive input was provided by all team members.

This case study will describe the events which occurred in the study's evolution in a chronological order (generally). The major sections of this case study are:

- Selection of Participants and Orientation Activities
- Identification of the Research Question
- Development of the Research Design
- Selection and Training of Observers
- Data Collection Activities
- Intervention Sessions
- Data Reduction Activities
- Report Writing
- Conclusions - A Road Map Only

Before embarking upon the chronological development of this study, the reader may choose to read the brief overview which follows. This overview provides a definition of what IR & DT is, describes the general context of the study, indicates the question selected for investigation, and gives a brief description of the data collection procedures.

OVERVIEW

In the first newsletter* describing the existence of two IR & DT studies, the following description was provided:

> Interactive Research and Development on Teaching (IR & DT) is a R & D strategy that places teachers, researchers, and trainer/developers together to inquire as a team into those questions, problems, and concerns of the classroom teacher. Decisions are made collaboratively regarding research issues and strategies and the concurrent development of training that grows from the research. Each member of an IR & DT team has parity and shares equal responsibility for decisions made by the team, from identification of the question/problem to the completion of all resultant R & D activities.

The members of the IR & DT team conducting this study were all employees of the San Diego Unified School District. The original team was comprised of four elementary school teachers, a researcher, and a trainer/developer. Three of the teachers were colleagues at a relatively small K-6 school with a faculty of 15. They taught in kindergarten and grades 1 and 2. The school's student population was approximately 400, primarily Black with some Spanish surnamed and a few other ethnic representatives. The fourth teacher, who team taught a third-fourth grade class of 60 students, was on the staff of a very large K-6 school (40 teachers) located in a suburban middle-income area. The student population was 1,200. The researcher was recruited from the Evaluation Services Department of the school district and was previously involved in conducting evaluations of various state and federally funded programs. The trainer/developer previously was attached to the district's Staff Development Department as a resource teacher providing inservice education to teachers in special education. An additional set of four teachers was recruited (just prior to data collection) in order to expand the data base. These teachers were selected so environmental characteristics (e.g., grade levels, school and student demographics) were similar to the original four IR & DT teachers.

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* *Interactive Research & Development on Teaching,* Far West Laboratory, San Francisco, Volume 1, Number 1, October 1977.

The question identified by the San Diego IR & DT team was: *"What are the events which disrupt classroom instruction and what are the most effective techniques teachers use to cope with these distractions?"* A distraction was defined as an event or stimulus which interrupts the teacher's actions or her intended flow of instruction.

Eight observers were employed and trained to assist in the data-collection phase of the study. Two were assigned to observe the classrooms of each participating teacher on nine different occasions. One observer used a checklist to classify the specific distractions and corresponding coping techniques used by the teacher. This observer also rated the effect of the techniques on the distractions (Quantitative Observer). The other observer took detailed notes on all that occurred during each observation period (Ethnographic Observer). Each classroom teacher responded to a set of questions following each of the nine occasions she was observed (Teacher Daily Log).

Each of the eight primary-grade classrooms was observed on nine occasions, spread over six weeks of instruction. The observations were during the reading period (or reading readiness for kindergarten) and typically were slightly less than one hour in duration.

Two quantitative classification schemes were developed by the IR & DT team--one explicating anticipated distraction categories, and the other classifying coping techniques. Besides classifying the distractions and the corresponding coping techniques which were exercised, the quantitative observer rated the effectiveness of the relationship of each particular coping technique in response to a specific distraction (distraction-coping linkage). Effectiveness of the distraction-coping linkages was rated with respect to: (1) the instructional time loss due to the distraction, (2) the degree of disjointedness of the instructional activity (interruption of instructional flow), and (3) the degree to which the distraction persisted after a coping technique had been utilized.

Each of the eight classroom teachers participated in two data-reviewing sessions (Intervention) between the sixth and seventh observations. These sessions were intended to provide feedback of the preliminary data which had been collected through the sixth observation. The IR & DT team sought to identify techniques which appeared to be functional, and the teachers were encouraged to develop plans to modify their coping styles ("Intervention Plans").

Support for the effort was obtained through a subcontract to the school district from Far West Laboratory. This provided funds for releasing the researcher half-time through the question generation, research design, data collection, and data analysis phases. The trainer/developer was released half-time throughout the study. Funds were available to release teacher participants from their classes or to pay them for out-of-class time devoted to study activities. Observer costs also were included.

The pages which follow describe the evolution of the study from the IR & DT team's perspective. As mentioned earlier, more detailed information regarding the research methodology may be found in other documents.

THE EVOLUTION OF THE STUDY

SELECTION OF PARTICIPANTS AND ORIENTATION ACTIVITIES

In the spring of 1977, researchers from the Far West Laboratory made arrangements with the San Diego Unified School District to conduct a cooperative research study with school district personnel. The process of interactive research (defined in the Introduction) was to involve four teachers, one person with research background, and another person with teacher inservice training experience.

After describing the general concepts of interactive research and development for teaching (hereafter called IR & DT) to various people in the San Diego Unified School District, the Far West personnel were successful in recruiting the six persons who were needed to participate in the research study (details of the criterion for participant selection and more context detail can be obtained elsewhere*). The six IR & DT recruits were informed that they would be participating in a study within a study. They were told that they would have much latitude in selecting a problem area for their study--the main criterion was to be relevancy to classroom instruction. A study of the IR & DT team's processes and interactions was to be conducted by Far West researchers.

A brief description of the teachers, the researcher, and the trainer/developer, as well as the context of the IR & DT study, has been provided in the Introduction of this document. Detailed descriptions of the teachers, their schools and classrooms may be found in the teacher case studies.

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* The Far West Laboratory document describing the IR & DT study (being prepared at the time this study was written).

Although there were two informal social sessions to discuss the concept of IR & DT, the official beginning of the study occurred in late August, 1977. A three-day orientation session was provided to the San Diego IR & DT team by Far West Laboratory personnel. Besides enabling participants to become more familiar with each other, the main actitivies of the orientation included: A discussion of the rationale for studying the IR & DT process (the IR & DT implementation study); clarification of what logs and data participants would need to keep for the implementation study; an overview of eight steps in conducting research; a presentation distinguishing (a) qualitative and quantitative research methods, and (b) naturalistic and experimental-control paradigms; clarification of roles and responsibilities of the participants; and a preliminary "brainstorming session" of participants with respect to potential questions worthy of research.

The activities listed above were structured by the Far West researchers in a manner to provide a quick overview of, and foundation for, the IR & DT study. The orientation, to a large degree, was conducted in a manner consistent with the philosophy of IR & DT--the opinions, thoughts, concerns, and remarks of all participants were encouraged and heard; particpants were treated as "equals," with parity of decision making being encouraged and evident.

Each of the members of the San Diego IR & DT team received from Far West personnel a copy of a "workscope" of the activities which were to be undertaken during the following three months (see Appendix A for a copy).

IDENTIFICATION OF THE RESEARCH QUESTION

One of the last orientation activities was a "problem brainstorming session." At that time, the members of the San Diego IR & DT team (the four teachers, researcher, and trainer/developer) expressed a variety of topics which they felt had merit as potential problems for the research study. The questions and problems which were presented represented a wide range of concerns--from a problem of employee-employer relations, including arbitration and grievance procedures, to a question of "How does a teacher instill a sense of security in a disadvantaged child?" The range of problems which were described was further accentuated by the varying levels of sophistication anticipated to properly research the proposed topics. Some problems which were proposed would have kept professional researchers busy for five years--with no definitive conclusions likely. Other questions were so basic and common that one could find a dozen masters theses analyzing the topics at most local universities.

Besides the initial set of questions, a few special considerations began to evolve during this initial session. One important parameter was that the question selected should be relevant to classroom teachers, and the conclusions/findings should lend themselves to dissemination activities, such as a teacher inservice education class. Another key point was that the data collection procedures should be compatible with classroom instruction. That is, the problem selected should lend itself to investigation in a naturalistic classroom setting.

An overriding consideration of this early brain-storming meeting reflected a concern of selecting a problem of appropriate significance. The IR & DT team members concurred that they did not wish to select a trivial problem which had been addressed by many researcher teams before them. On the other hand, they did not wish to embark on an adventure which would be beyond their monetary, time, energy, and intellectual resources.

With a set of possible research questions/problems, and an informal collection of guiding principles, the IR & DT team arranged a weekly meeting schedule for September and October. The next two sessions could be classified as exploratory brain-storming sessions. A wide variety of topics were considered. Examples of some of them follow:

- Contrasts of teacher/student values
- Pressure upon school to return the curriculum solely to "the basics"
- Success of programs relative to classroom environments
- Amount of time spent by teachers in planning and record keeping
- Effects of society's changing life styles upon students
- What are the factors which contribute to unusually slow progress of capable students?
- How teachers handle interruptions
- How to increase parent participation in school-related activities
- The effect of class size on classroom activities
- Effects of peer interactions
- Social structure versus security in the classroom
- The use of instructional aides in the classroom
- Locus of control of teachers

At this stage (early September), the IR & DT team started to become more sensitive to the types of information which could be collected without the data being too inferential. They asked the researcher to illustrate some of the types of data and data-collection instruments which had been used in other research studies.

At the next meeting, the researcher brought the IR & DT team samples of data collection forms (e.g., Flanders' Interaction Analysis forms), an article reviewing the existence of a wide variety of observational forms written by Rosenshine and Furst*, and a special research issue of News, Notes, and Quotes (a Phi Delta Kappa newsletter for the summer of 1977). During this same meeting, the researcher explained to the group the existence of ERIC research materials, and he indicated that the Eric-on-line (computer terminal) capability would be available to the group. It was decided at this meeting (mid-September) that the number of candidate problems would have to be limited to permit a reasonable literature review.

For the next couple of weeks, the researcher collected literature which was relevant to some of the priority questions. Examples of the topics at this stage follow:

- Providing students an environment of security and the impact upon student learning and/or self-concept
- The role of teacher enthusiasm upon student learning
- The effect of motivation upon student learning behaviors
- Teachers' nonverbal behaviors with respect to classroom management

At the September 20 meeting, the group was becoming anxious with respect to the selection of the question (due to be identified by October 15). At least four questions were being seriously considered and consensus was not near at hand. One of the teacher members of the team proposed a new question--a question which tended to incorporate interesting dimensions from the other suggested questions. A rough paraphrasing of the question is, "What are the distractions which occur in classrooms and how do teachers cope with them?" The other members of the group could identify dimensions of this topic in which their "pet topics" might be embedded (e.g., nonverbal gestures, learning environment, teacher enthusiasm, and motivation). The group responded very favorably to the new topic. The researcher was asked to check out the available literature.

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* Rosenshine and Furst, in *Second Handbook of Research on Teaching.*

Some references in the literature were found. The general appeal of the question had grown by the next weekly meeting. Throughout the problem identification phase (roughly September), the IR & DT teachers had been seeking input from their colleagues at their schools. The distraction question had much appeal. The group decided to schedule a Saturday meeting to further clarify the question and to consider the type of data which might be collected. The group had concurred that meeting between 3:30 and 6:30 p.m., after a day of classroom teaching and/or other responsibilities, was not conducive to creative thinking.

A refreshing and productive Saturday meeting (October 1) led to the selection of the following question:

> *What are the strategies and techniques which classroom teachers use to cope with distractions to classroom instruction and how effective are the techniques?*

During this meeting, the group listed common distractions they had encountered in their classrooms and the techniques which they and their fellow teachers used in coping with such distractions. These initial lists were later to be used as the skeletal framework for two classification schemes--one to code distractions, and the other to indicate coping techniques. The group began to consider factors which could be indicative of the relative effectiveness of the coping techniques. Consideration of the amount of time lost (for both student and teacher) was one outcome which the group saw as being measurable without being highly inferential. Other considerations included: effectiveness of classroom management; reduction in the number of corrective actions; acceptance/adherence of students to coping requests, disjointedness of the flow of classroom instruction; amount of classroom instruction; amount of classroom work satisfactorily completed by students; and student achievement gains.

A typed copy of a rough diagram to which the group frequently referred may be found on the next page. The San Diego IR & DT team had identified their question and they were now beginning to refine the data sources they would need to answer the question.

One consideration which did emerge at this stage related to the teachers' concern about outcome measures. The implicit evaluative aspect of "effective coping techniques" provoked expressions of "Who is going to be looking at these data?" and "Am I being evaluated with respect to my coping techniques?" These concerns were resolved by the teachers having considerable input in the development of the research design.

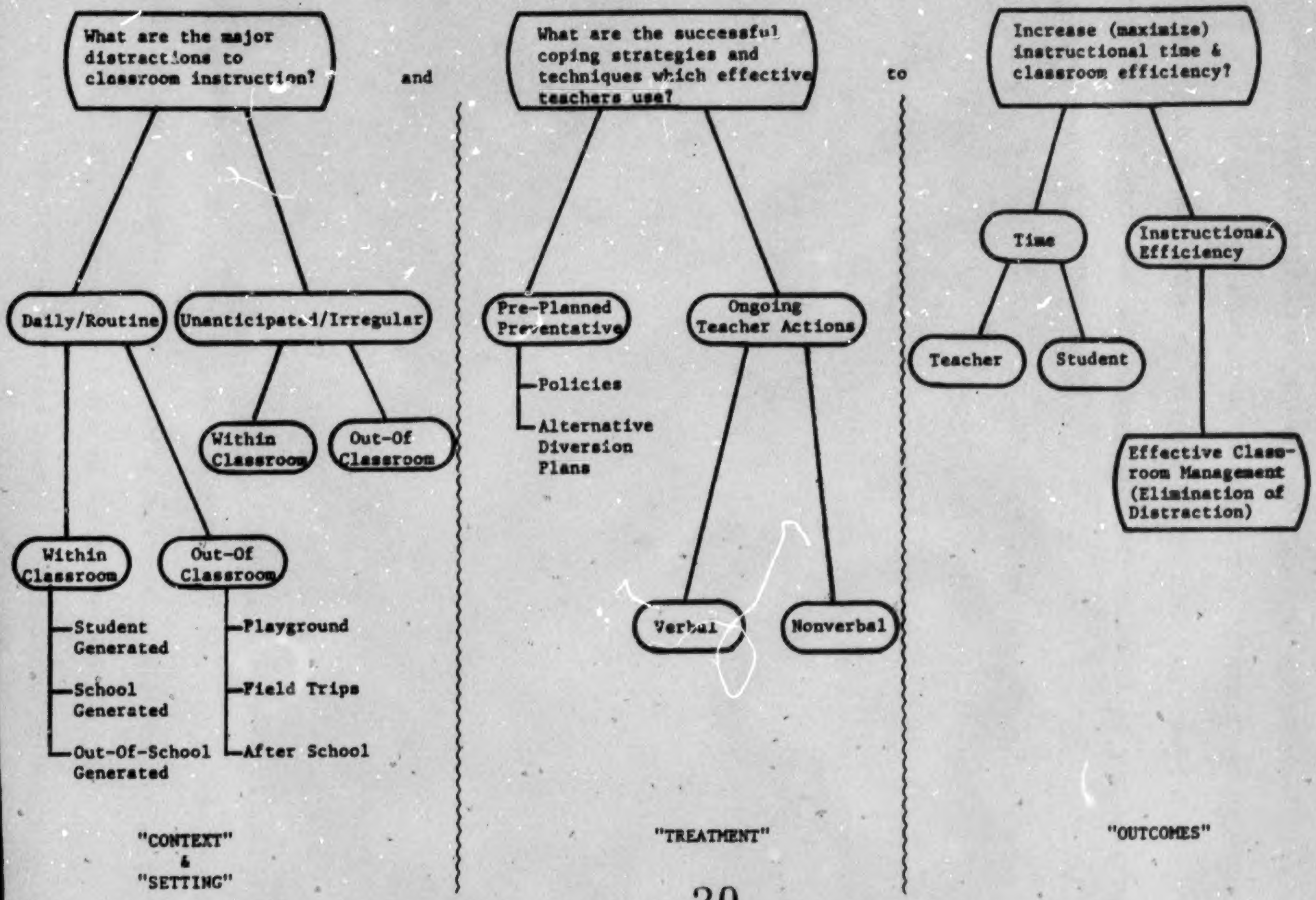
DEVELOPMENT OF THE RESEARCH DESIGN

As the IR & DT team members reviewed the various questions, they informally established a set of guiding principles. Four of the most frequently mentioned principles were: (1) the question needs to be relevant to classroom teachers, (2) the data collected should not be too highly inferential (i.e., the data could be objectively quantified), (3) the findings should lend themselves to credible dissemination via a teacher inservice class, and (4) the study should be naturalistic (i.e., occur in regularly operating classrooms without an experimental manipulation).

The interest expressed by other teachers in the "coping with classroom distractions" question seemed indicative that the first principle, relevancy to teachers, would be satisfied. The other principles were

FIGURE 1

THE RESEARCH QUESTION


What are the major distractions to classroom instruction?
and
What are the successful coping strategies and techniques which effective teachers use?
to
Increase (maximize) instructional time & classroom efficiency?
Daily/Routine
Unanticipated/Irregular
Within Classroom
Out-Of Classroom
Within Classroom
Out-Of Classroom
Student Generated
School Generated
Out-Of-School Generated
Playground
Field Trips
After School
Pre-Planned Preventative
Ongoing Teacher Actions
Policies
Alternative Diversion Plans
Verbal
Nonverbal
Time
Instructional Efficiency
Teacher
Student
Effective Classroom Management (Elimination of Distraction)
"CONTEXT & "SETTING"
"TREATMENT"
"OUTCOMES"

subject to the kinds of data to be collected and the procedures to be utilized.

During this interval (early October to mid November), the members of the IR & DT team visited each other's classrooms as well as other teachers' classes. These visits permitted the lists of distractions and coping techniques to be expanded, and they also provided some insights into the kinds of "outcome data" which might be collected. In addition, these visits (which were initially suggested by the trainer/developer seeking potential inservice dimensions) further substantiated the universality of the question. This conclusion was evidenced by the interest expressed and the support given by teachers outside the IR & DT team.

One outcome which the IR & DT team saw as being important, as well as measureable, was the amount of classroom instructional time which was expended by the teacher in coping with distractions. There was considerable interest in the San Diego Unified School District in the relationship of students' "time on task" and the amount of learning attained. Regional meetings had occurred within the school district during the fall of 1977 to familiarize each elementary principal with a review of literature regarding many factors involved in the acquisition of knowledge (Berliner & Rosenshine, 1977). The IR & DT team was permitted attendance at one of these principals' meetings and the experience further confirmed the team's feeling that the distraction question was significant. An indication of the time loss due to classroom distractions--and how it might be minimized--would be helpful, informative, and timely.

A second outcome which the IR & DT team decided could be quantified was the degree of disjointedness of an instructional activity due to classroom distractions (e.g., To what degree were the classroom teacher and her students completing the instructional task as initially planned by the teacher?). The IR & DT team called this dimension the flow of classroom instruction.

A third outcome measure was to be the degree of elimination of the distraction (e.g., To what degree does a distraction persist after a coping strategy has been utilized?). This dimension was acknowledged by the IR & DT team as being potentially difficult to measure accurately in some instances, but it was determined to be essential.

During the observations of other teachers' classrooms, additional dimensions worthy of data collection became apparent. One such consideration related to certain key students in classrooms. It was consistently noted during the observations that a large portion of classroom distractions were caused by a few key students. Also, varying degrees of sensitivity of students to teacher coping techniques were observed (e.g., A shy and quiet student would react differently to teacher's "request to conform" than would an outgoing aggressive child).

During the summer orientation session, the IR & DT team had become aware of a data-collection technique called ethnographic observation. The personnel from the Far West Laboratory had illustrated the in-depth information which could be obtained by an observer who took detailed notes of all that occurred during an observational period (ethnographic notes).

The IR & DT team decided that descriptions of the frequent and varied distractions which occur in primary classrooms perhaps would be embedded in such sets of notes. The focus of an observer on selected key students might also uncover other interesting findings. Hence, the IR & DT team decided to involve an ethnographic observer in each classroom observation described in the research design. The team hoped that these observers would provide detailed information about the distractions and coping techniques which occur in classrooms. Also written into the preliminary research design were directions for the ethnographic observers to provide additional focus upon three or four selected key students in each classroom.

It was further decided that another observer would collect categorical data. This observer would utilize a quantitative checklist on which would be categories to indicate the following: (1) the time of the observation when the distraction occurred, (2) the size of the instructional group working with the teacher, (3) the distraction which occurred, (4) the coping technique utilized, and (5) three indications of the effectiveness of the coping technique (time, flow, and elimination ratings). [A copy of the initial quantitative checklist can be found on page 30 of the preliminary research proposal which is included as Appendix B to this document.]

During the last two weeks of November, the team cooperatively drafted the formal research design. Due to his past experience, plus the classroom responsibilities which the teachers had each day, the researcher was given primary responsibility for developing the first draft of the proposal. Much input and refinement were provided by all members of the IR & DT team. Some technical assistance was requested by the team, and was received from Far West Laboratory personnel. The IR & DT team met twice a week and on one Saturday during this time interval. Typically, the group would review a draft of a portion of the research design and then recommend modifications to the researcher.

The research proposal was to be presented to a review panel at the Far West Laboratory during the first week of December. Prior to their presentation to this panel of research experts (National Advisory Panel for IR & DT), the researcher and one teacher participated in a "dress rehearsal" in front of their peers. A brief presentation, followed by a question and answer period, provided the two presenters some practice for the upcoming National Advisory Panel review and some additional insights. The dress rehearsal panel consisted of the other IR & DT members, the district Director of Inservice Education, and one participating school's principal.

On December 8, 1978, the research proposal was presented to the National Advisory Panel. The panel had reviewed a copy of the research design prior to the arrival of the IR & DT team presenters. [An entire copy of the draft of the proposal submitted to the National Advisory Panel may be found in Appendix B.] A two-and-one-half hour discussion included many questions seeking clarification of concepts in the research design, as well as many suggestions for improvement. A formal set of recommendations were later formulated and provided in writing to be considered in revising the research proposal.

Upon return to San Diego, the two presenters shared the suggestions for modification with the remainder of the IR & DT team. The team then proceeded to modify the research design and/or explain their rationale for choosing to retain certain original dimensions. A final research proposal was due by mid January. A memo detailing changes and areas where no modifications were made was sent to the project coordinating personnel at the Far West Laboratory (a copy may be found in Appendix C).

In general, the original design proposal had been looked upon favorably and only a few major modifications were included. Due to monetary constraints, the number of classroom observations was reduced from twelve to nine per teacher. Also, due to the amount of data-collecting responsibility the ethnographic observers would have, it was decided that an additional special focus upon key students would not be possible. The IR & DT team reluctantly agreed that more data might be collected than they would be able to analyze; hence, the "key kid" dimension was excluded from the design.

At this stage, the IR & DT team needed to recruit additional participants: four additional teachers (to expand the data base) and eight observers (to assist in data-collection observations). The teachers were recruited from schools and grade levels similar to those of the teachers of the original IR & DT team.

A school located in the general neighborhood of the three-member IR & DT school was identified as having similar environmental characteristics (similar socio-economic status , similar specially funded programs, similar ethnicity, similar academic achievement data, etc.). After contacting the site administrator, the trainer/developer explained the essence of the proposed IR & DT study to teachers at the school. Upon hearing of the question under investigation and receiving a brief overview of the research design, three teachers eagerly volunteered to participate. They had been recommended as likely candidates by the school's principal, and they matched, gradewise, the original IR & DT team members.

In order to obtain a grade-level counterpart (teacher with same level of students and similar environmental factors) for the IR & DT teacher who taught in an open-environment classroom, an open loft school was identified. Although the environments were not as well matched as the other three classroom pairs, an acceptable grade-level counterpart was identified and successfully recruited.

One recommendation made by the National Advisory Panel was related to the ethnographic observers. The original design called for the employment of college students with ethnographic data-collecting experience. The advisory panel recommended, instead, to recruit former classroom teachers and then to provide them with appropriate training. In order to obtain a pool of candidates to interview, the IR & DT team members (researcher, trainer/developer and original four teachers) and the additional four teacher-participants recommended names of potential observers. The names were supplemented by suggestions from principals and other persons. The selection and training of observers occurred in mid January.

SELECTION AND TRAINING OF OBSERVERS

From a set of more than 20 names, interviews were arranged for 12 observer candidates. The other ten or so persons could not, or chose not, to be interviewed. Generally, the reason for not interviewing (determined during preliminary phone conversations) was related to not having the necessary time to contribute to the study. Almost without exception, the people contacted for interviews thought that the research question was very interesting.

An unusual interview procedure was arranged by the researcher and the trainer/developer (mid January). Just prior to the formal interviews, the candidates were asked to view a 55-second segment of a video tape. The video tape showed a teacher leading a class in a discussion. The observer candidates had been provided a sheet which explained that they would be participating in a descriptive note-taking activity and which illustrated a sample of ethnographic notes.

During the interview session, after asking questions regarding the candidates' background (including classroom and/or observational experiences) and clarifying the purpose of the research study, the researcher and trainer/developer asked the interviewees to describe what they had observed on the video tape.

Classroom experience, descriptive ability, and an attitude of sincere interest in the study were the key criteria in selecting the eight persons to participate as observers. Seven of the eight persons selected had taught--their classroom experience ranged from two years to fifteen years (median, eight years). The eighth observer had not taught, but had served as a parent volunteer in classrooms. She also had participated as an observer in a preschool project while she was in college (three of the other observers also had functioned as observers before).

The eight observers met with the IR & DT researcher and trainer/developer for observational training during the last week of January and the first week of February. Seven training sessions were conducted, typically lasting from 8:30 a.m. to noon. Since most of the observers had home-related obligations (e.g., small children, youth group involvement), the morning schedule was arranged for both the training and the formal observations.

The training was presented in four phases. They were: (1) orientation to the concept of IR & DT and the question under investigation, (2) training that included practice with television video tapes of classroom activities, (3) training that included practice in classrooms, and (4) summary activities and reliability check.

During the first phase, the observers were informed of the theory of the IR & DT process, had the research question clarified, were given an overview of the two types of observations which were to occur (quantitative and ethnographic), and were given a brief opportunity to practice both kinds of observation (using video tapes). Since four of the eight observers were to function as quantitative observers and the other four as ethnographic observers, the decision of who was to do which was determined at the end of the first session. The observers' interests and their abilities (as noted by the researcher and trainer/developer) were key criteria in the division of the observers into two four-membered groups. Reading materials were provided to each group to further clarify its role in the study.

The primary purposes of the second phase were to provide the observers opportunities to practice the observational techniques they were being taught and to clarify the data-collection processes they would be using. The researcher worked primarily with the quantitative group of observers, while the trainer/developer inserviced the ethnographic observers. Typically, the training sequence went as follows: each observational group received separate instruction from their trainer, everyone viewed the same video tape, the groups separated again to practice recording the data, and, finally, they interactively discussed the observation. The two groups observed three video tapes which ranged from about two minutes to five minutes. Before and after each video tape, additional observational techniques were taught and clarified.

The use of the video tapes provided the researcher and trainer/developer the opportunity to control the complexity of the observation, as well as allowing an "instant replay" for follow-up clarification. One disadvantage of the video tapes was that they restricted the observers' range of observation to only the camera angle. During the latter part of this phase (third morning of training), the observers were informed that they should focus their observations upon the teacher and her interactions with students. That is, there was clarification of the definition of "distraction" for the purpose of this study at that time. [A *distraction* was defined as an event or stimulus which interrupts the teacher's actions or her intended flow of instruction.] The formation of four two-membered observational teams (one quantitative and one ethnographic observer each) concluded the second phase of training.

On Tuesday of the second week of training, the third phase of the observational training began. Arrangements had been made with four teachers to permit the observational teams to collect data in "live" classroom environments. The first encounter with live environments was scheduled for 20 minutes. The insights, problems, and frustrations of this first live visit were many. The main obstacle seemed to be that the observers were perplexed by all the events which were occurring, and they were frustrated that they "could not capture everything that was happening." The researcher clarified that the observers were not expected to be able to capture everything that was happening. He and the trainer/developer again emphasized that the primary focus would have to be the teacher--even though the observers were cognizant that other disruptive activities might be occurring in the classrooms. In addition to clarifying the focus of the study, and the fact that the observations were intended to provide only a representative sample of what occurred in those classrooms, some other techniques were reviewed to simplify data collection (e.g., using shorthand codes, how to deal with repetitive or prolonged distractions).

At this time, an additional data-collection technique was introduced to the observational teams. A small (2 1/4 in. by 3/4 in. by 1/2 in.) wireless microphone-transmitter which could be tuned to an FM station was demonstrated. A radio-cassette recorder tuned to an appropriate FM station recorded the voices transmitted through the microphone. The primary purpose of the microphone was to permit the observer to hear (after the observation) relatively quiet student-teacher conversations--which otherwise might have been lost or miscoded. The remote microphone not only provided audio reference to events which the observers would not otherwise hear, but also seemed to provide the observers a "back-up" set of information. This additional data source seemed to relieve the observers--once they became successful in operating the equipment. Pilot efforts with the remote microphones indicated that the naturalistic intent of the study was not being compromised by the discrete use of the small microphones.

The observers used the remote microphone and tape recording capability during their last two practice observations. Each of the last two observations was 40 minutes long. As a pair of observers entered a classroom, they simply provided the small microphone to the teacher. The radio-cassette recorder was placed inconspicuously out of the way. After the teacher clipped the microphone on her clothing, the two observers visually signaled each other to start the observation and the tape recorder.

Each day, after collecting the observational data for the practice sessions, the eight observers returned to the classroom used for the observational training. At this time, the observers would practice their data reduction techniques. Typically, each ethnographic observer would embellish her shorthand notes--sometimes listening to the teacher-voice tape to clarify direct quotes--and then she would tape record her entire observation on a cassette tape. These ethnographic tapes would be transcribed for each daily observation during the study.

Each quantitative observer coded each distraction and each coping technique which she had noted on the data-collection sheet. [A copy of the Quantitative Checklist (with rating codes clarified) is shown on the next page.] She then practiced entering these data and the effectiveness ratings for TIME, FLOW, and ELIMINATION on a computer mark-sensed card. At this time (early February), a computer program was being written which would scan the mark-sensed cards and store a set of data in the computer for future analyses.

Prior to the fourth phase (reliability check) and before data collection began, each observational team visited the two classrooms which were to be observed for the study. Two informal visits were scheduled to provide the observers an opportunity to orient themselves to the classrooms and children. At the same time, it was hoped that the teacher and her students would become somewhat accustomed to the additional two observers and the small microphone.

The eight observers, the researcher, and the trainer/developer met one additional time before formal data collection began. The purpose of this meeting was to administer a reliability test and to also resolve any data-collection problems that still existed. Consistent with the IR & DT philosophy, the entire observer training experience had been open and interactive. The observers had had opportunities to recommend changes in the data-collection instruments and procedures. Many of the recommendations

QUANTITATIVE CHECKLIST

EVENT	TIME	GROUP	DISTRACTION	CODE	COPING TECHNIQUE	CODE	TIME OFF TASK					FLOW OF INST.					ELIM. OF DIS.			COMMENTS
							<5	<10	<20	<40	>40	1	2	3	4	5	1	2	3	
									The time the teacher is taken off her intended task.	Duration of the Distraction — (in seconds)		No apparent break in the instructional flow (distraction ignored)	Distraction mainly to the teacher; doesn't bother the students	Minor distraction to both teacher and most students in the group	Instruction disrupted but teacher brings the group back to task.	Instruction completely disrupted; very difficult or not possible to bring the group back to task.	Apparent elimination of distraction	Distraction continues at a reduced (acceptable) level	Distraction continues and the teacher uses another technique.	

FIGURE 2

were based upon insights the observers had gained through their classroom experiences--either from previous years when they had taught or from the practice observations. In general, the recommendations were well founded and were integrated into the data collection methodology.

To check inter-rater reliability, the researcher and trainer/developer had prepared a video tape of a classroom observation. Many varied distractions were edited into the portion of the video tape shown to the observers. Under conditions similar to how the observations would occur (e.g., using the remote microphones, using data collecting forms, having no interaction during the observation), the four teams observed the ten-minute video tape. After the observation, normal data-recording procedures were followed. The ethnographic observers embellished their shorthand notes and then tape recorded them. The quantitative observers coded the distractions and coding techniques which they had observed. These codes, plus the ratings of effectiveness for time, flow, and elimination were marked on the computer cards.

The researcher and the trainer/developer had identified eight major distractive events which they believed should be recorded by both quantitative and ethnographic observers. Two of the quantitative observers recorded eight of the eight major distractions, while each of the other two quantitative observers' checklists noted six of the eight events. There were still some errors in attaching a correct distraction or coping-technique code to the events noted. This fact was illustrated by nine coding errors from the set of 60 identified.

Similar to the quantitative observers, the ethnographic observers described an average of 87.5 percent of the major distraction events.

Additional minor distractions were noted by both ethnographic and quantitative observers. [A more detailed and technical description of the reliability test may be found in *The Formal Research Study*.]

As a result of the recommendations made by the eight observers and the preliminary results of the reliability tests, it was decided that the observational trainers (the researcher and the trainer/developer) would be available to the observers during certain times of the day throughout the data-collection phase of the study.

Each of the eight observers had participated in the four phases of observational training, and each had had an opportunity to orient herself to the teachers, students, and classroom environments in which the data would be collected. The study appeared ready to move into the data-collection phase (mid February).

DATA COLLECTION ACTIVITIES

The collection of observational data began in four of the eight selected classrooms on February 14, Valentine's Day. The events and activities normally associated with Valentine's Day got the data-collection phase of the study on its "naturalistic" way. In two of the four classrooms to be observed, the observations had to be postponed for 45 minutes--due to an unannounced special assembly.

Arrangements had been made at one of the school sites to have a room in which the observers could record their data. The 15-foot by 30-foot room provided a convenient, but cramped, meeting place. This room was a secure location to keep the materials and equipment needed for the observations, as well as a place to return the processed data for editing and verification.

Typically, an observational day went as follows: The two members of an observational team (quantitative and ethnographic observers) would meet at the data-reduction room (approximately 8:45 a.m.). They would get the materials needed for the day's observation (e.g., multiple copies of the quantitative checklist, a steno notebook for rough ethnographic notes, a 120-minute cassette tape to record teacher-student conversations, the recording equipment including the remote microphone, and a 60-minute cassette tape for the teacher to record daily log information). After tuning in the radio-cassette recorder, the observers would progress to the classroom (approximately 9:00 a.m.). Upon entering the classroom, one observer would discreetly provide the teacher the remote microphone, while the other observer would leave a blank cassette tape for the teacher to record information (this "Teacher Daily Log" will be discussed later). The classroom observation was scheduled during the reading instructional time and typically lasted around 55 minutes.

While in the classroom, the two observers attempted to be as inconspicuous as possible, while still locating themselves in positions which provided good vantage points. After the observation, the observers returned to the data-reduction room with the microphone equipment, etc.

In the data-reduction room, the ethnographic observer went to a location around the perimeter of the room to embellish her notes, listened to the teacher voice tape when necessary, and then recorded her observational notes for the day. The quantitative observer, especially during the early observations, met in the central portion of the room with the other quantitative observers and the researcher. This meeting permitted them to seek clarification of the coding of unusual distraction-coping events (linkages) which had been observed. After assigning classification codes to each distraction and each coping technique on the data collection checklist, the observer would transfer these codes, plus effectiveness ratings for TIME, FLOW, and ELIMINATION for each distraction-coding linkage, to a computer mark-sensed card.

After tape recording her observations (ethnographer) or marking her computer cards (quantitative observer), the observer checked any processed data which had been returned from previous observations. The ethnographic observer edited her notes which had been transcribed from the cassette tapes (turn-around time was two days for Tuesday observations and five or six days for Wednesday and Thursday observations). A sample of an edited page of ethnographic notes follows. Student names have been partially darkened to maintain anonymity.

The quantitative observer checked the codes and effectiveness ratings on a computer printout (Daily Event Map) to verify that the mark-sensed cards had been properly processed by the computer card reader. Necessary changes were directed to the researcher for modification of the computer data set. The quantitative observer also recorded on the Daily Event Maps comments to clarify any distraction or coping technique which had been coded as "other" due to a lack of an appropriate classification category. [A copy of a Daily Event Map which corresponds to the sample ethnographic notes follows (see Figures 3 and 4). The numbers on the ethnographic notes correspond to the event numbers on the event map.]

Generally, this review of processed data lasted until 11:30 a.m. or noon. This same pattern of events occurred on Tuesday, Wednesday, and Thursday of each week of observations, with minor variations. The pair of observers would observe one teacher's classroom one week, and then would observe that teacher's grade-level counterpart's classroom the following week (e.g., Teacher A and W--both kindergarten teachers). The pairs of observers eventually observed both of their two teachers on nine occasions. Six of these nine observations occurred prior to the preliminary data feedback sessions ("Intervention"), and the other three after the intervention. [An illustration of the pattern of visits may be found on pages 13 and 14 of the initial research proposal found in Appendix B--except the number of observations was reduced to nine from twelve.] Most observations occurred on a Tuesday through Thursday schedule, with Mondays and Fridays used for alternate back-up days only rarely. Most variations of the schedule occurred in Teacher D's classroom due to her involvement in other programs.

While in the classrooms, the two observers focused mainly on the classroom teacher and the students with whom she was working. The quantitative observational data reflects the teacher-centered focus. Due to the definition of distraction for this study, the quantitative observer coded only those distractions which interrupted the teacher's intended flow of instruction (even slightly). The classification system included a coping technique category of "ignoring," if the teacher chose to let a distraction run its course. To mark this ignoring coping category, the quantitative observer had to be relatively certain that the teacher had exhibited an awareness of the distraction before she ignored it. If a distraction was occurring which the teacher was not apparently aware of (or at least was not indicating awareness overtly), then it was not coded as a distraction. The quantitative observer's attention was obviously teacher-focused.

Teacher Number:
Student Number:
Date of Observation:
Researcher Number:
Protocol Number:

FIGURE 3

SAMPLE ETHNOGRAPHIC NOTES
TEACHER C SIXTH OBSERVATION

Visit #6

T. 8:57 The observation begins at 8:57. The teacher is seated at a
N.L. 1 large table in the rear of the room. There is no aide in the
room at this time. Most students are seated reading. A few
go to the book centers. The teacher calls A____. A____goes
to her table and gets his help for the day. She tells a girl
#1 who has come up out of turn, "Go sit down, I'll call you when
it is your turn." D_____ enters the room from the outside.
#2 The teacher says shush to S____, "Down." "D_____, get out
your book, P___, Sit down. Q______ sit down. W_____. B______."
The teacher shakes her head at B______. "E_____. F____ get
your book out you don't have your work yet. L_____." Then
she calls V_____ to come to her table. The teacher looks up
#3 at the class and shushes them, "You are reading out loud."
Then she calls D_____ and gives him his directions for the day.
He leaves. The teacher stands up, takes a stack of folders
and begins to move to the tables in the room, distributing
#4 the folders and giving directions. She says, "S_____ sit down.
B______ sit down. S____ where is your book?" M_____ enters
the room from the outside. The teacher looks at M_____ and
#5 says, "D____ and M_____" as they are beginning to talk. She
T. 7 ' goes on to another table distributing folders. The teacher
goes on to another table. She says, "Sit down" to D____.
Aide #1 enters the room. Aide #2 is absent on this day. The
teacher says to the class,"You are nice and quiet, I like
the way you are reading." The aide puts some materials on
the ledge where the teacher will have her reading group.
D_____ is saying something about a book. The teacher says,
#6 two times, "Put it back for me." She walks on to another
table quickly distributing folders and giving directions for
the day. Then her voice level rises and she says, "Okay, I
would like F_____ and D_____ and the rest of the group getting
ready to read and your pencils. Sit in the chairs and do not
move the chairs." She emphasizes this. F_____ and D_____
do not usually read with this group unless the aide is absent.
Seven students go to the listening post. The teacher says,
"Come on K________," she calls M_____and says,"M_____ are
you in this group?" Someone answers no, M_____ says yes.
The teacher says, "Come on bring your pencil and your eraser."
"E________ lets's go." The teacher arrives at the circle and
two or three of the students have moved the chairs from the
#7 way she wanted them. She says, "I said do not move the chairs.
"Where was that chair?" She says that two times to K_________
and straightens out the rest of the grop. Then jokingly she
says, "See what good listeners I have?" She repeats the
T. 12 ' directions in Spanish to E________ who has also moved a chair.
#8 The teacher sets the timer on the chalkboard ledge. M_____
moves his chair. The teacher says, "What did I say, M_____?"
The aide is moving around the room helping a few students at
their table. Then she walks on to her table. She has two
students with her in this area to help with their work. The
teacher has a stack of test booklets on her lap. She turns
each booklet to the correct page and puts the child's name
on it. Then she hands them to the student. She gives them some
directions as they receive their booklets. Then she tells
them to just set them on their laps. All we are going to do

EVENT MAP

Teacher code: C

Observation #6

EVENT #	TIME	GROUP	DISTRACTION CODE	COPING CODE	EFFECTIVENESS TIME	EFFECTIVENESS FLOW	EFFECTIVENESS ELIMINATION
1	3	I	11	11	1	2	1
2	3	I	15	11	1	2	1
3	4	I	14	13	1	2	1
4	6	I	15	11	1	2	1
5	7	I	13	11	1	2	1
6	9	I	17	51	1	2	1
7	12	T	16	11	2	3	1
8	13	S	17	13	1	2	1
9	14	S	16	19	1	2	1
10	14	S	15	11	1	3	1
11	16	S	25	34	2	4	1
12	18	S	17	11	5	4	2
13	18	S	15	13	1	3	1
14	22	S	11	13	1	3	1
15	23	S	15	11	1	3	1
16	24	S	17	56	2	3	2
17	25	S	14	11	1	3	1
18	28	S	42	27	1	2	1
19	31	S	17	12	2	4	1
20	32	S	15	11	2	3	2
21	32	S	42	27	1	3	1
22	33	S	17	11	1	2	1
23	34	T	18	11	3	4	2
24	36	T	11	25	1	2	1
25	37	S	14	11	1	3	1
26	40	S	15	11	1	2	1
27	44	S	18	11	1	2	1
28	44	S	18	11	1	2	1
29	46	S	11	27	1	2	1
30	47	S	15	11	3	3	2

CODING #19 - TEACHER SAYS "SORRY"

FIGURE 4

The ethnographic observer also focused most of her observational time on the teacher. In order to capture the frame of reference of many events, this observer would frequently scan the classroom. Many times, the ethnographic notes would include descriptions of the events leading up to, or following, distractions. Since the ethnographic observer was not restricted to describing only distractions and coping techniques, her observational notes provided a more complete contextual perspective than could be obtained from only the quantitative data. The pairs of observers made a conscientious effort to begin at the same time, and to indicate at various intervals the time of the observation. These time references were intended to provide cross references of the two data sets during the data analysis phase of the study.

Another set of data was collected to permit *post hoc* analysis of why certain things happened. Teachers were asked to respond to a set of questions after each observation (Teacher Daily Log). Due to the responsibilities associated with teaching, most teachers chose to respond to the set of questions at the end of the school day or during the evening, when they would not be interrupted. These questions were intended to give insights that only the teacher had (e.g., mood and physical condition of the teacher that day, extenuating circumstances related to classroom activities/distractions). The questions and a sample of responses from a Teacher Daily Log may be found in Appendix D. The teachers responded to these questions only on those days they were observed. They recorded their answers on 60-minute cassette tapes and generally returned the tapes to the observers the following day. Each of these tapes was transcribed and included in the data set. They were not reviewed by either observer due to concern of potential contamination or bias during future observations.

Hence, during each observation, the perspectives of three persons were being recorded--the ethnographer, the quantitative observer, and the teacher whose classroom had been observed. The data were being transcribed or loaded to a computer in an ongoing manner. This permitted a review and verification of the transformed data while the observations were still fresh in the observers' minds. This ongoing data reduction also was intended to permit feedback of preliminary findings after each classroom had been observed six times.

INTERVENTION SESSIONS

As had been specified in the original project proposal, two feedback sessions occurred. The project teachers referred to these meetings as the intervention sessions. It perhaps should be clarified that the objective of these sessions was not to provide a pre/post intervention contrast as evidenced by changes in quantitative and ethnographic data. Instead, the purpose of these information-sharing meetings was primarily to review the data collected and to consider and encourage positive changes. Hence, the degree of receptivity of the teachers to the data collected in their classrooms was of primary interest to the trainer/developer and the researcher.

The two sessions occurred between the sixth and seventh observations. Actually, there was a three-week interval between these observations. The first feedback session occurred on Thursday, March 16, and focused on the ethnographic data. After a one-week break for spring vacation, the teachers returned on Friday, March 31, to inspect and analyze the quantitative data. On both occasions, classroom substitutes were provided for all eight teachers. Both meetings lasted from 8:30 in the morning until the mid-afternoon.

The first information-sharing session took place at the home of the trainer/developer. One week before, he had met informally with the eight classroom observers and received their opinions about the types of distractions which they had been noting. Comments and suggestions were solicited and received. This information, plus a review of the ethnographic notes, provided the trainer/developer a preliminary framework upon which he led the ethnographic feedback session.

Prior to this session, each of the teachers received a set of ethnographic notes for the first six observations in her classroom (see sample on page 32). The teachers were asked to review their ethnographic notes before attending the meeting. The trainer/developer lead the group through a TABA-type discussion--identifying frequently occurring distractions, indicating the higher priority distractions (based upon degree of dislike and disruption), and then brainstorming to determine ways to cope with the higher priority distractions.

Some of the distractions which were top vote getters were: disruptive interactions between students; repeated distractions from the same child, bordering on defiance; and general classroom noise. A few of the coping techniques which were discussed extensively included: using non-verbal signals to inform disruptive students of their unacceptable actions, using a question approach to ask students why they were disruptive, and physically rearranging classroom environmental factors (e.g., location of students and desks, availability of materials).

After reviewing their conclusions about the ethnographic data, the teachers were asked to draft plans of how they would cope (differently) with their higher priority distractions. Copies of these tentative plans were given to the trainer/developer and the researcher for their review.

The second data-reviewing session occurred two weeks later. This feedback experience focused upon the quantitative data which had been collected during the first six observations.

Each teacher was provided a set of event maps for the six observations which had occurred in her class. A brief review of the event maps helped make the teachers aware of the general frequency of the distractions which had been coded in their classrooms. Certain patterns, common distractions, frequently utilized coping techniques, and common combinations of distractions and coping techniques (linkages) became increasingly apparent.

To facilitate the review of the most frequently occurring distractions and coping techniques, a computer program had been written to summarize such data. The researcher displayed a "Distraction Profile" of the total group's data (a histogram displaying the percentage of occurrence of distractions for all eight teachers' data combined). Each teacher was then provided summary statistics regarding the occurrence of distractions in her classroom. The teachers drew their own distraction profiles, which they eagerly compared with the total group profile and those of their fellow teachers.

Computer printouts were provided to each teacher to illustrate the relative effectiveness (TIME, FLOW, and ELIMINATION) of the various coping techniques. The first printout displayed the aggregated data for all eight teachers for the first six observations. For each distraction, the printout included the frequency, along with a set of three effectiveness histograms for each coping technique used (linked) in conjunction with the specific distraction. The figure on the following page displays the linkage of Distraction #11 (STUDENT VERBALLY INTERRUPTING THE TEACHER) with Coping Technique #11 (TEACHER GIVES DIRECT COMMAND). [The classification systems for all distractions and coping techniques may be found in Appendices E and F, respectively.]

Before receiving their own sets of linkage printouts, the teachers, trainer/developer, and researcher reviewed the aggregated data. They noted which coping techniques tended to be more effective and less effective, as indicated by the histograms for TIME, FLOW, and ELIMINATION. After drawing general conclusions for the whole group's data, each teacher received her own set of linkage histograms (covering all distraction-coping technique linkages in her classroom through the first six observations).* The teachers reviewed their own printouts and contrasted their patterns of effectiveness for various distractions with the group's effectiveness histograms for the same distractions. After reviewing their major distractions, the teachers were given their draft plans for coping, which had been written after the ethnographic data-sharing session. They were asked to develop more specific plans, based upon the combination of

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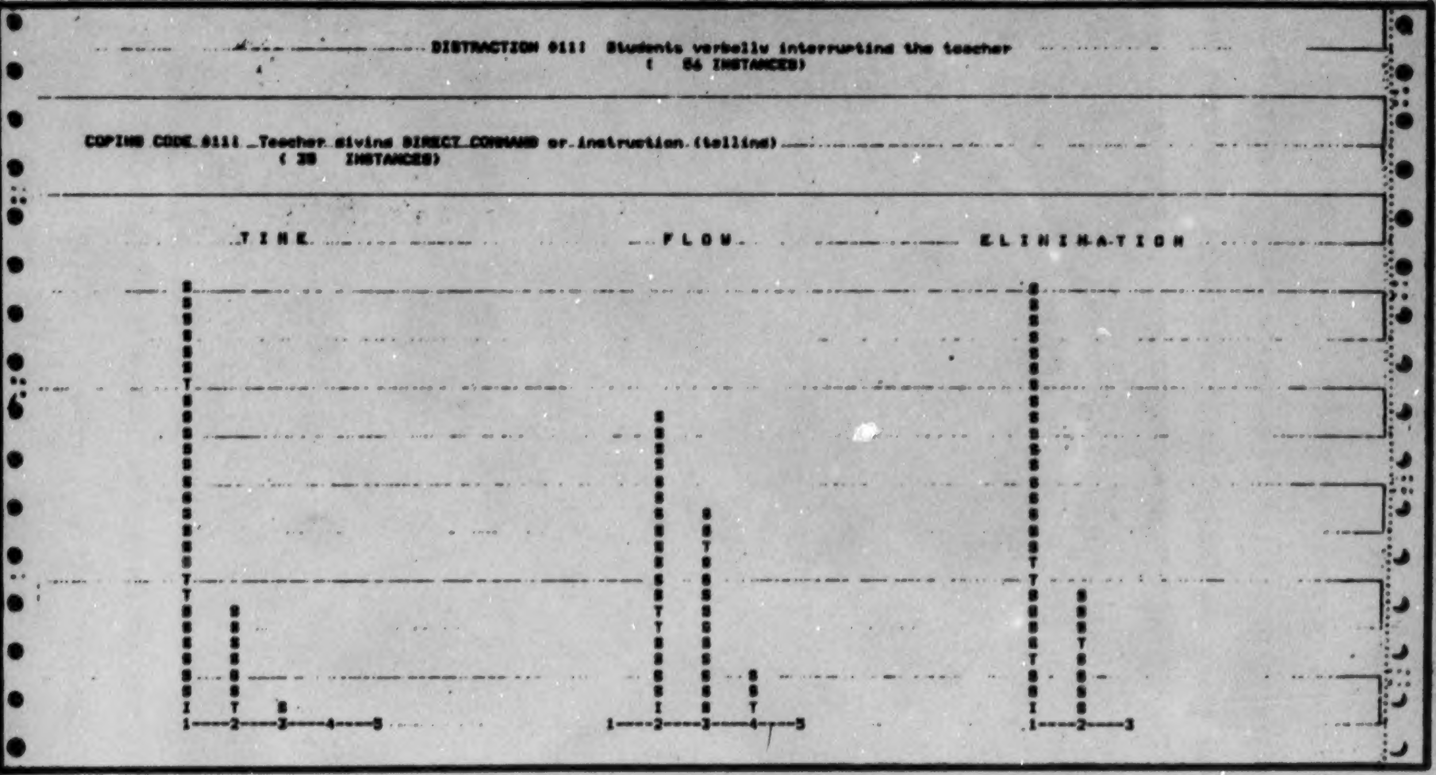
* Some of the general conclusions drawn from the quantitative data for the first six observations were: the DIRECT COMMAND (Coping Technique #11) was most frequently used, was quick, and had relatively good ELIMINATION; TEACHER USING BODY LANGUAGE AND GESTURES (Coping Technique #21) was outstanding in the TIME dimension (produced quick results) and surprisingly effective in maintaining the FLOW of instruction and ELIMINATING the distraction; TEACHER REMINDING STUDENTS OF RULES (Coping Technique #13) was time consuming, but had good ELIMINATION: and IGNORING (Coping Technique #25) "had good possibilities for the knowing teacher."

FIGURE 5

SAMPLE OF COMPUTER PRINTOUT
OF "TIME", "FLOW" AND "ELIMINATION" HISTOGRAMS



DISTRACTION 0111 Students verbally interrupting the teacher
(56 INSTANCES)

COPING CODE 0111 Teacher giving DIRECT COMMAND or instruction (telling)
(35 INSTANCES)

1 = LESS THAN 5 SECONDS
2 = 6 - 10 SECONDS
3 = 11 - 20 SECONDS
4 = 21 - 40 SECONDS
5 = MORE THAN 40 SECONDS

1 = NO APPARENT BREAK IN THE INSTRUCTIONAL FLOW (DISTRACTION IGNORED)
2 = DISTRACTION MAINLY TO TEACHER; DOESN'T BOTHER STUDENTS
3 = MINOR DISTRACTION TO BOTH TEACHER AND MOST STUDENTS IN THE GROUP
4 = INSTRUCTION DISRUPTED, BUT TEACHER BRINGS THE GROUP BACK
5 = INSTRUCTION COMPLETELY DISRUPTED; VERY DIFFICULT OR NOT POSSIBLE TO BRING THE GROUP BACK TO TASK

1 = APPARENT ELIMINATION OF DISTRACTION
2 = DISTRACTION CONTINUES AT A REDUCED (ACCEPTABLE) LEVEL
3 = DISTRACTION CONTINUES AND TEACHER USES ANOTHER TECHNIQUE

CODE: I=INDIVIDUALIZED INSTRUCTION
S=SMALL GROUP
L=LARGE GROUP
T=TRANSITIONAL TIME

ethnographic and quantitative information they had reviewed. Each teacher completed her plan and made an informal commitment to implement it during the remaining three observations.

The observations resumed the following week. The observers knew the teachers would be trying to utilize or emphasize certain coping techniques, but no observer was given any indication of what these techniques would be. Data collection continued as before the intervention period for the last three observations in each classroom. No other discussions or meetings were held with the participating teachers until after the completion of the observations.

The teacher participants and observers were surveyed to determine their availability during the data-reduction stage of the project (to occur in June and July). All indicated an interest in participating in the review of the final data, although some teachers indicated that they would be available on a limited-time basis only due to other summer commitments.

DATA REDUCTION ACTIVITIES

As was mentioned in the previous section, some preliminary data reduction occurred during the intervention phase of the study. The teachers had become aware of which distractions were occurring frequently (and infrequently), which coping techniques were being utilized, and which linkages seemed to have had desirable (and less than desirable) effectiveness ratings.

After the intervention, observational data were collected in each of the eight classrooms on three more occasions (Observations 7, 8, and 9). The remaining ethnographic observations were recorded and transcribed, and the corresponding quantitative data were input to the computer. All data were complete, in the sense of being ready for review.

A time line was established which had the teachers involved in data analyses and writing during June, July, and part of August. In preparation for the teachers' review of the information which had been collected, certain preliminary work was done. The observers were brought together to reduce some of the data. This included: a review of the quantitative data by drawing histograms of the distractions and coping techniques which occurred in the respective classrooms, highlighting (with yellow marking pens) selected instances of distractions in the ethnographic notes, highlighting events which illustrated the unique coping styles of the teachers, highlighting unusual events which were observed, and highlighting miscellaneous classroom occurrences. The purpose of these activities was to help simplify the teachers' task of data analysis. The IR & DT team had decided that the observers would be effective in these types of tasks since they were so familiar with their notes and quantitative data.

The IR & DT team had also decided that it was desirable to budget funds to employ support personnel during the analysis-writing phase of the project. Hence, the budget reflected two part-time writers (to provide assistance in presenting clear and meaningful narrative), a part-time ethnographic/statistical researcher (to provide "research" assistance during the month of June and to work with the IR & DT researcher during the fall on the formal research study), and the eight observers (to provide additional data reduction assistance as determined by the teachers, and to collaborate with the teachers as needed).

The formal reduction activities occurred during the summer months--mainly June and July. Computer printouts summarized much of the quantitative data (frequency and percentage of occurrence of distractions, coping techniques and linkages; histograms reflecting the effectiveness for TIME, FLOW, and ELIMINATION for all linkages; aggregated data of time lost due to distractions, etc.). These data were provided to the teachers by the researcher to assist in their writing of the teacher case studies. A full set of the appropriate ethnographic notes was also provided to each teacher.

During the summer months, data reduction and analyses were occurring from differing perspectives--teachers', trainer/developer's, researcher's--dependent upon their focus. That is, the teachers were usually reviewing the data with their grade-level counterparts looking at distractions that they had in common. They were looking for similarities and differences in their coping techniques. In addition, they were looking for patterns in the data which might provide some interesting insights (e.g., Why did Distraction # ___ occur more on Tuesdays than other days? Reason: no aide in the classroom during the reading period on Tuesdays).

On the other hand, the trainer/developer was looking at the data from a perspective of findings which he could share in an inservice class he was planning. He sought information which would be interesting to an inservice audience of teachers, and which would have a positive impact upon the distraction-coping techniques of such an audience.

The researcher was looking at the preliminary data from still another perspective. He was seeking descriptive information which might reflect patterns and conclusions which would have external validity; i.e., would apply to others outside the study. Not only was he noting the common distractions, coping techniques, distraction-coping linkages, etc., but he was also trying to see if there were findings which might point to an emerging model of distraction coping.

The summer data analyses activities were, therefore, many and varied. Many people--teachers, observers, writers, researchers, and the trainer/developer--were extensively involved in the review of the data which had been collected during the classroom observations. Many of these same people had the responsibility of synthesizing their analyses and writing up their findings from their perspectives.

REPORT WRITING

The logical conclusion to any research endeavor is the writing of a summary report (or reports). At the time of the writing of this document (mid-fall, 1978), this writing activity was occurring. The teachers were finishing their case studies, the trainer/developer was attempting to write his report while simultaneously teaching his inservice class, and the researcher was wading through the different subsets of data he had generated. Each of the above persons was writing a document from his/her perspective which, when combined, hopefully would provide an accurate total picture of the study. (The reader is referred to the initial page of the Introduction section of this document for a graphic display of how the parts fit together.)

Since these writing projects were occurring at the same time this report was written, it was not possible to summarize their results here. Instead, the purpose of this section is to briefly describe the activities associated with the writing of the reports. [As mentioned earlier in this document, the description (and insights) which are provided in this case study, *The Evolution of Study*, are mainly those of the researcher.]

The initial proposal for this study described, in a general sense, that which would be investigated and reported. During the implementation of the study, it became increasingly apparent that more information and insights were evolving than could be described in the "research report" as initially conceptualized. Hence, a multiple report format (cluster of documents) was proposed by the researcher. The teachers and the trainer/developer agreed that the cluster approach would permit each of their perspectives to be expressed.

During the months of March and April, 1978, the availability and interests of the teachers (both Level I and Level II) were surveyed. In general, Level I teachers (those four teachers who had been involved as IR&DT team members since the beginning) planned to be involved on a full-time basis during the summer months. Level II teachers (those four teachers who began participation at the data-collection phase of the study) indicated that they would be available on a limited-time basis (one-half time to one-eighth time).

The format of the teacher case studies was discussed during the presummer months. The overriding criteria were that the teacher case studies would be informative, insightful, and interesting (especially to other teachers), as opposed to being too formal, analytical, and "researchy." A tentative format was agreed upon in which pairs of grade-level counterparts would write studies together; i.e., the two kindergarten teachers were to write a case study together, the two first-grade teachers together, etc. The primary topics and subsections of these reports basically dictated themselves--distractions, coping techniques, distraction-coping linkages, etc. An additional section called "Teacher Insights" was included to insure that each teacher would have an opportunity to express her feelings and thoughts about participating in the study.

The general formats of *The Formal Research Study* and *The Inservice Training Report* were explicated in the workscope of activities provided by Far West Laboratory personnel (see Appendix G).

This document, *The Evolution of the Study,* was deemed necessary by the researcher. It would provide a chronological development of the evolution of the study, thereby helping the other parts of the study to fit together more smoothly, while also keeping the researcher off the streets at night and out of trouble.

The writing of the teacher case studies occurred in a classroom bungalow which had been modified to provide most of the necessary work area and materials. Although the teachers had flexibility in the hours they chose to analyze and write, they generally worked from 8 a.m. to mid-afternoon daily. There was frequent sharing of ideas among teachers, observers, and the support personnel. The range of emotions during the writing process was wide--from relaxed kidding and joking to tenseness, emotional fatigue, and irritability. Most of the latter emotions resulted from the tight time line, the formidable nature of the task, and the level of pride which the individuals took in their efforts.

The primary focus during the summer months was the teacher case studies. In general, the trainer/developer worked closely with the teachers, functioning as a sounding board, a motivator, and a provider of alternate ways of approaching the study's data. The researcher functioned in a similar sense, while also being involved with some fundamental logistics problems (e.g., coordinating typing of draft, duplicating multiple copies of drafts for editing, exerting pressures to maintain a demanding time line). Both researcher and trainer/developer did some editing of typed drafts (mainly to determine if the information was consistent with the study). Part-time writers provided valuable assistance with respect to grammatical and sentence structure corrections, while also being "devil's advocates" by not-so-naively asking "What do you mean by ---, that has not been mentioned earlier in your study?"

As mentioned earlier, the observers were also employed (total of five half-day sessions each) to provide assistance to the teachers as requested. Most frequently, they were asked to correlate the ethnographic and quantitative data (e.g., "Find me the excerpt in the ethnographic notes which describes why this Distraction #14-Coping Technique #15 linkage took so long during Observation #5"; "Separate the Distraction #11's into two groups--those which involved students working with me at the reading circle, and those caused by students apart from the reading circle."). In addition, the observers provided many insights to the teachers which only they, with their many hours of classroom observation, could provide.

The grade-level counterparts working arrangements varied. Teachers A and W (kindergarten teachers) worked together almost daily for approximately three weeks. The grade-level teams of B and X and C and Y met only occasionally, Teachers B and C being in regular attendance through the summer, while Teachers X and Y had other summer obligations. Actually, most of Teacher Y's portion of the Teachers C and Y case study was written by one of the part-time writers. Teacher Y met with the writer to provide the information needed, and then the writer prepared a draft of the appropriate narrative for her review.

Teachers D and Z rarely met during the summer months, working independently due to other summertime commitments. The observers for Teachers D and Z were budgeted for additional time to do analysis of data and some writing, since the two teachers in question were so unavailable.

The major problems which occurred during the summer writing effort were associated with the definition of the task. Since the teachers had little, if any, experience in analyzing data and attempting to summarize findings in a written format, there were many frustrating and anxious moments. The flexibility built into the basic case study structure also caused some uncomfortable moments; e.g., "I see that when ____ wrote her Coping section she mentioned (this or that). I didn't. Should I? Is mine wrong?" Fortunately, these frustrations were far outweighed by many "discoveries" in the data, plus a sense of accomplishment as the case studies started to fit together.

The researcher's definition of "draft copy" (to be completed in early September) and the teachers' expectations of how final their drafts were to be also were points of anxiety. The teachers hoped that they would be "done" before school started in September. The researcher expected drafts (his definition) to be completed in September. The writers, trainer/developer, and the researcher were then to complete their editing during September. Final type-ready copy was then to be prepared by the teachers during late September and early October. After some negotiations and compromising (e.g., editing changes would not have to be incorporated unless the teachers so chose), the stubborn researcher got his way.

In summary, as of early November, the writing actitivites were proceeding smoothly. Meeting the late November deadline appeared possible. The relationship of the IR & DT team members was perhaps at a high-water mark of amiability. The level of candor was likewise high. The intragroup friendships were healthy and alive, considering the wide range of tasks and emotions which have occurred during the previous 15 months.

CONCLUSIONS -- A ROAD MAP ONLY

For the reader seeking to review a brief summary of the cogent conclusions of the study, "Coping with Classroom Distractions," this is not the place. This brief section will provide an indication of where readers may find the conclusions they are seeking. That is, this section is a road map at best.

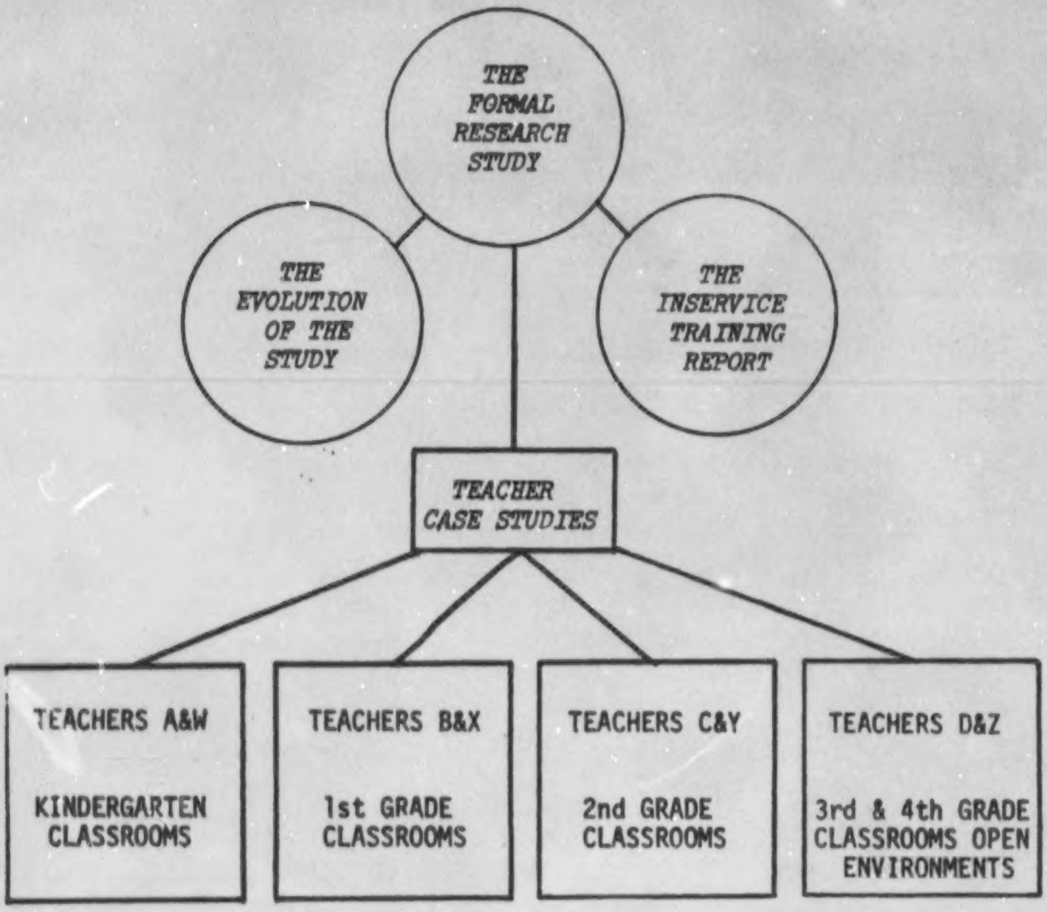
The four teacher case studies provide four separately bound and independently written summaries of the study from the teachers' perspectives. Specifics of the context in which the study occurred are described in detail. Discussions of findings and conclusions are found in each teacher case study--with the focus being the data of the two grade-level counterparts for whom that study was written. That is, each of the four teacher case studies centers on two teachers, not all eight teacher participants. Beyond the findings and conclusions gleaned from the data, each teacher case study includes a section called "Teacher Insights." Teachers were given carte blanche to express any concepts which they so chose.

The Inservice Training Report details the activities undertaken in an inservice class offered by the trainer/developer. A preliminary evaluation of the impact of the class upon more than 20 participants is also provided.

The Formal Research Study provides a formal presentation of a typical research report (i.e., Purpose of the Study, Review of Literature, Methodology, Findings, Conclusions, Recommendations, and an extrapolation to an emerging model to conceptualize classroom distractions).

The Evolution of the Study provided a chronological development of the evolution of the study from the initial identification of the problem to the writing of findings.

For the reader seeking a graphic road map, the diagram below is provided. Good reading.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THE EVOLUTION OF THE STUDY
THE INSERVICE TRAINING REPORT
TEACHER CASE STUDIES
TEACHERS A&W
KINDERGARTEN CLASSROOMS
TEACHERS B&X
1st GRADE CLASSROOMS
TEACHERS C&Y
2nd GRADE CLASSROOMS
TEACHERS D&Z
3rd & 4th GRADE CLASSROOMS OPEN ENVIRONMENTS

APPENDIX A

Initial Workscope

APPENDIX A

FAR WEST LABORATORY
FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

WORK SCOPE
for
Implementation of Interactive Research and Development on Teaching
in the
San Diego City Unified School District

I. OVERVIEW

The Far West Laboratory for Educational Research and Development was established in 1966 as the regional Laboratory serving California, Nevada, and Utah, to develop programs of research and development that improve educational opportunities for students. One of its programs, the Effective Teacher Education Program (ETEP), has been conducting research on quality teaching since 1973. It is also well-known for having developed Minicourses for training teachers, nine of which are available commercially. Present research efforts involve the development and application to the study of classroom teaching and learning research methodologies which are based on an ecological paradigm. This research utilizes the teacher as participant observer and analyzer of his/her own data, as well as non-participant observers working in an interactive research setting. The program is currently under the direction of Dr. William J. Tikunoff and Dr. Beatrice A. Ward.

Under funding from the National Institute of Education, FWL will conduct a two year inquiry into the multidimensional effects of the implementation at two national sites of an interactive model for research, development, and training in teaching. The model grows out of both the ten year time lag between the inception and use of research findings experienced under the traditional, linear approach to educational research and development, and the minimal effect on instructional changes in the nation's classrooms of educational research conducted in this traditional fashion.

The central defining characteristic of Interactive Research and Development is that the intended users of educational R&D are involved in the total research process, rather than merely being the recipients of a finished package handed to them, or imposed on them. Potential benefits claimed for Interactive Research and Development include:

(a) greater relevance to existing problems in the classroom setting;

(b) collapsing of the time involved in reaching application of research outcomes, along with the associated reduction in costs;

(c) more reality-based procedures for implementation;

(d) greater motivation or acceptance of R&D outcomes by the intended users on the basis of an awareness that their perspective was represented in the R&D process; and

(e) benefits integrally associated with the R&D process to the immediate participants.

Briefly, Interactive R&D proposes that putting together teachers, researchers, and teacher trainers to investigate educational problems will result in interactions that will yield more useful research findings for teachers. At the same time, teachers and teacher trainers work together to produce procedures for training other teachers in use of the findings.

It is anticipated that the study of Interactive R&D will result in important information about the process of including teachers to produce quality research which is also useful in the classroom, and about the development of training for teachers that grows out of the ongoing research process, in particular both the data collection methodology and the findings. Such information also will be useful to NIE in making decisions about conducting research in the future.

II. PURPOSE

There are two components of this study. The first is to implement Interactive R&D in the San Diego City Unified School District. The second is to study the effects of Interactive R&D on the participants, the institutions, and on the R&D process itself.

A. Implementation of Interactive R&D on Teaching

The purpose of Interactive Research and Development on Teaching (IR&DT) is to inquire into teaching/learning problems based directly on the concerns expressed by teacher participants and to develop teacher training processes and procedures which grow out of the research process itself. This inquiry will be carried on by a team composed of a researcher, developer (whose primary professional responsibility is the professional development of teachers) and at least one elementary school classroom teacher. They will collectively participate in the determination of the problem area to be studied, formulation of the question to be asked and nature of the data to be collected, selection of research methodology to be used, collection and analysis of the data, reporting of findings, and the concurrent design and implementation of training procedures growing from the research findings as well as from the research process itself.

Implementation will be accomplished in two phases in order to be coterminous with the funding periods of the total Interactive R&D study. Phase I is the period from September 1 through November 30, 1977. Phase II is the period from December 1, 1977 through November 30, 1978. Implementation activities, however, should be perceived as a continuing process of research and development.

B. Study of Effects on R&D Process, Participants, Institutions

Concurrently with the implementation of the inquiry described above, a study of the implementation process and effects of IR&DT will be conducted by the staff of the Far West Laboratory. This study will concentrate on: (1) the implementation and the effects of the IR&DT strategy i.e., the nature and degree of "interactiveness" in decision-making, changes in participants, changes in the institutions which have representatives on the team, and changes in the ecology of the classrooms of participating teachers; and (2) the research and development outcomes, i.e., the extent to which the requirements of rigorous, scientific inquiry are met, the contribution of the research to new knowledge about teaching and learning, the applicability of this knowledge in the classroom, and the training processes and procedures which utilize the research findings and methodology and the learning activities that are designed/redesigned to incorporate research findings.

III. SITE STRATEGIES

Given the purposes of the study described above there are two strategies that will be employed. The first will operate onsite to implement IR&DT, and is the primary responsibility of the San Diego City Unified School District's team. The second strategy will be employed in the overall study of the implementation and is the responsibility of FWL staff, but relies upon heavy input from the SDCUSD team. Both are discussed below.

A. Implementation of Interactive R&D on Teaching

To conduct IR&DT, a team of participants from the SDCUSD will be recruited. Minimally, the IR&DT team will include (a) a researcher who demonstrates mature research capabilities and skills; (b) a developer who has been responsible for inservice staff development; and (c) at least one teacher at the elementary school level who indicates a desire to inquire into educational problems, and who is willing to volunteer his/her own classroom as the forum for such inquiry. Selection of team members will be accomplished cooperatively by SDCUSD and FWL in order to comply with school district procedures and needs as well as to insure the necessary capabilities for conducting IR&DT. It is expected that personnel selected will serve on the IR&DT team from September 1, 1977 through November 30, 1978, and that any changes in personnel will require prior approval of FWL.

For Phase I (which is the topic of this agreement) the researcher and developer will be assigned by SDCUSD to the IR&DT team for one-half of their working hours during the calendar months of September, October, and November, 1977. For their services, the FWL will reimburse SDCUSD for the appropriate portion of salaries and benefits to be determined as a part of the negotiation for the budget based on this scope of work.

While it is not possible to predict exactly how much of the teacher'(s') time will be required during September, October, and November, 1977, it is anticipated that this will approximate the equivalence of one school day's time per week. The FWL will reimburse the SDCUSD for teachers' participation on the IR&DT team in accordance with SDCUSD regulations. However, past experience indicates that teachers can be remunerated in one of two ways. In the event their participation in IR&DT activities is required during the school day, the FWL will reimburse SDCUSD for substitute teachers should they be required. Time that teachers spend in IR&DT activities outside their normal school day will be paid for according to SDCUSD regulations and will also be reimbursed to SDCUSD by the FWL. Any additional teachers whose time may be required as resources or consultants will be reimbursed by the FWL according to the same guidelines.

B. Study of Implementation Strategy

In addition to the time spent in conducting the research, the IR&DT team will be expected to contribute appropriate input to studying the implementation of the model. This activity is described below (see Activity 2). In addition to input from the team, occasional site visits by the FWL staff responsible for the study will be conducted for the purposes of collecting data as described in Activity 2 below.

IV. ACTIVITIES AND DELIVERABLES

As previously stated, activities of the SDCUSD/IR&DT team will be conducted during the period September 1, 1977 and November 30, 1978. However, funding will be in two phases. Phase I of this agreement will be from September 1 through November 30, 1977. Phase II will begin December 1, 1977 and continue through November 30, 1978. It is understood that the Phase II continuation is contingent upon successful completion of Phase I activities as described here, as well as upon continued funding of the FWL for this activity by NIE (see V. Budget for details).

Activities and deliverables for Phase I are described here in detail and form the expected work scope for this phase of funding. Phase II is discussed only generally. It is understood that a work scope statement for Phase II will be developed at a later date and negotiated in a similar fashion subject to the contingencies set forth above and in "Section V. Budget" of this work scope.

PHASE I

A. ACTIVITIES

Activity 1: Participation in Orientation

Each team will meet for three days in August to participate, under the direction of FWL staff, in an orientation to Interactive Research and Development on Teaching and to undergo training in the reporting procedures (described below) for the study of implementation. The orientation sessions, onsite, will be held for approximately six hours each day. The participants will be paid directly for their participation by the FWL according to SDUSD salary guidelines for such activities.

Activity 2: Provision of Input to Implementation Study

In addition to carrying on an inquiry into teaching/learning problems, the team will also provide FWL staff with data pertinent to the study of the implementation of IR&DT by audio tapes of all team meetings, personal logs, interviews, records of communication, responses to questionnaires, and any additional means initiated by the FWL staff. In addition, the IR&DT team will participate in site visits by FWL staff which will include IR&DT team meetings, classroom observation, interviews, etc.

Activity 3: Generation of the Research Question (Sept. 1 to Oct. 15, 1977)

During the period September 1 to October 15, 1977 the IR&DT team will meet the equivalence of one-day-per-week at a minimum to confer about and decide upon the problem area to be studied and the question to be researched.

The responsibility of teachers in this process is to raise issues that are of concern to them as a result of their ongoing classroom teaching experience and to come to an agreement on the question(s) to be studied.

The responsibility of the researcher during this process is to elicit issues and concerns from teachers, and, on the basis of his/her training and expertise, determine the researchability of the question. It is anticipated that this effort will also involve a search of the literature before a final question is decided upon.

The responsibility of the developer during this process is to provide appropriate input from his/her teaching and training experience to the selection of a topic. Also, the developer will be expected to identify potential procedures from the research process being utilized by the team which have importance for the training of teachers (inservice and preservice), and to report these in a systematic fashion.

In addition, it will be the responsibility of all members of the IR&DT team to observe in classrooms of the IR&DT teachers and classrooms other than those of the participating IR&DT teachers in order to test the presence of the selected problem. It is expected that the degree of its presence will provide the basis for confirmation of the question to be studied, and that these data will be duly reported as a part of Deliverable 1 (see below).

The question to be researched will be reported to FWL no later than October 15, 1977 (see Deliverable 1 below).

During this period the team also will provide feedback in the manner prescribed in Activity 2 (above). Technical assistance during this activity will be provided by FWL staff.

Activity 4: Selection of Data and Data Collection Procedures (Sept. 1 to Oct. 31, 1977)

Once a researchable question has been formulated, the team members will continue to meet and consider what data most relevant to the question under study to collect. It is expected that this will take place between September 1 and October 31, 1977. It will be especially important that the input at this stage reflect the multiple perspectives of all participants. The teachers will be a reliable resource in assuring that all potentially useful information is considered in the decision. When the data to be gathered have been identified, the team will determine procedures to be used to collect it, including who will collect and for how long. Because it is deemed important to preserve, insofar as is possible, the existing ecology of the classroom, it will be necessary for the IR&DT team to try out data collection techniques prior to final selection and to report the extent to which the methods tried are feasible.

The responsibility of the teachers at this stage will be to suggest, based on their intimate knowledge of classroom life, possible sources of data which might be useful and to collaborate with the IR&DT team as to their appropriateness. In addition, teachers will be expected to pilot test in their own classroom(s) data collection procedures which require their participation in order to insure that these are feasible given the constraints of their classroom responsibilities.

The responsibility of the researcher during this stage will be to suggest possible data sources and to monitor for appropriateness other suggestions. In addition, the researcher will be expected to suggest data collection procedures and to assist in the trial of procedures in classrooms. (S)he will be responsible for preparing necessary data collection instruments and procedures, pilot testing these in relation to their reliability and validity given the total ecology of the classroom and in light of preserving it as carefully as possible, and reporting these data as a part of the deliverable report for this activity.

The responsibility of the developer during this stage will be threefold. First the developer will contribute suggestions for possible sources of data. Second (s)he will visit teachers' classrooms to identify additional data sources, and will assist in the trial of data collection procedures and suggest possible alternatives. Third (s)he also will examine the process of data collection as a possible techniques for training teachers, if appropriate, begin devising and testing ways to implement it.

Data collection procedures to be used will be reported to FWL no later than October 31, 1977 (see Deliverable 2 below).

Team members will continue to provide feedback to FWL in the manner prescribed above in Activity 2. FWL staff will provide technical assistance during this activity.

Activity 5: Preparation of Research Design (Sept. 1 to Nov. 30, 1977)

Upon completion of the above activities the team will prepare a research design to inquire systematically into the phenomena they wish to study. While it is recognized that the researcher has the skills to construct the final design, it is anticipated that (s)he will rely also on input from the team when decisions become necessary.

It is expected that the research design will follow standard format and will contain minimally:

--a statement of the question and the purpose of the study, including a review of the appropriate literature to establish the need for further study;

--a description of the variables to be studied and of the nature of data to be collected;

--a plan for collecting the data;

--a plan for analyzing the data;

--a statement of expected outcomes of the study.

The research design will be delivered to FWL no later than November 30, 1977 (see Deliverable 3 below).

Activity 6: Preparation of Inservice Training Report (Sept. 1 to Nov. 30, 1977)

It will be an additional responsibility of the developer to consider both the process of collaboration and the collection of data as potential processes for use in teacher training and to devise procedures to implement them. This will be reported in the Interim Training Report to be submitted to FWL no later than November 30, 1977 (see Deliverable 4 below).

The completed design will be reviewed and critiqued by the four members of the National Advisory Panel for Interactive R&D on Teaching. In the event that questions are raised concerning the design, the IR&DT team will be expected either to defend their decision, or to alter the design in order to accommodate suggestions by the Panel.

B. DELIVERABLES

		Due Date
1.	Question to researched	October 15, 1977
2.	Data collection procedures to be used	October 31, 1977
3.	Research Design	November 30, 1977
4.	Interim Training Report	November 30, 1977
5.	For Study of Implementation Input	#1 September 30, 1977 #2 October 31, 1977 #3 November 30, 1977*

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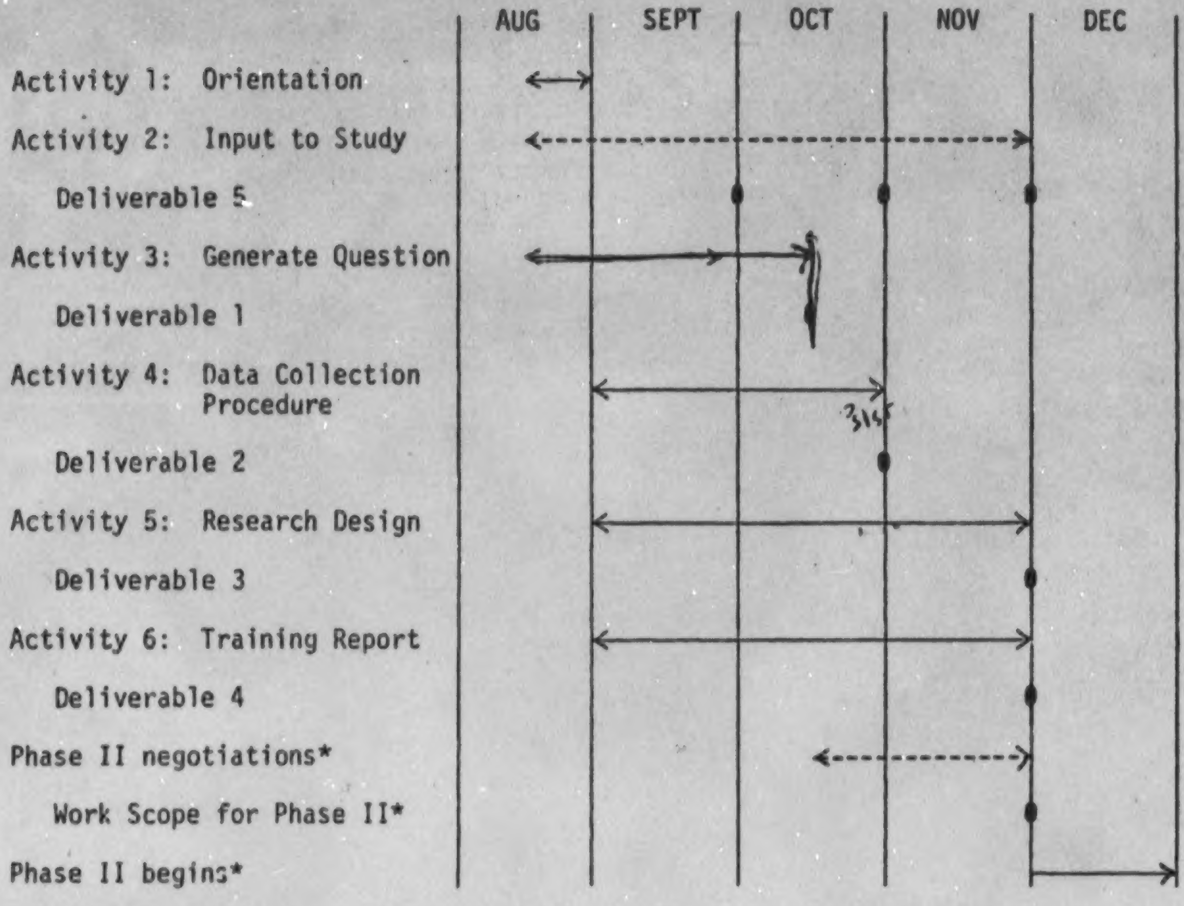
*Study of Implementation input will be delivered as it is completed. These dates serve as minimal "due date" suggestions only.

Timeline for Implementation of Interactive R&D on Teaching



*These negotiations are subject to continued funding by NIE, as well as to other usual contingencies stated under Part V Budget (below).

PHASE II

The purpose of this portion of the scope of work is to outline activities for Phase II. Phase II activities will be presented in detail as a function of negotiating the continuation of funding for the period December 1, 1977 through November 30, 1978. However, the activities for Phase II will grow out of those already described for Phase I, and include at a minimum:

1. Collection of data
2. Analysis of data
3. Writing of Final Research Report(s)
4. Writing of Final Training Report(s).

As previously discussed, the activities in Phase II are to be considered a continuation of those initiated in Phase I. Therefore, it is expected that the same IR&DT team members selected for Phase I will continue to participate in Phase II, with approximately the same time requirements necessary. Should changes in team personnel become necessary, they will need prior approval by FWL.

It should be noted that Phase II includes the summer months of 1978. The IR&DT team should plan to work on their research/development efforts during that time. It is understood, however, that all planned activities must exist within the parameters of the budget to be negotiated for Phase II.

APPENDIX B

Preliminary Research Proposal

APPENDIX B

COPING WITH CLASSROOM DISTRACTIONS

or

"Please Take A Number, I'll Be Right With You"

A Proposal for Study

Submitted by

The San Diego Interactive Research & Development on Teaching Team

Grant Behnke
Janice Bennett
Cindy Chase
Jane Day
Charlotte Lazar
David Mittleholtz

ABSTRACT OF THE PROPOSAL

Coping With Classroom Distractions

The purpose of the proposed study is to investigate those events which disrupt classroom instruction and the techniques which teachers use to cope with these distractions. Eight primary grade classrooms will be observed on 12 occasions during reading instruction. In each classroom, the observations of two non-participant observers will be complemented through insights provided by the classroom teacher. One non-participant observer will collect quantitative data using an observation checklist, while the other observer will employ ethnographic techniques. The principal variables to be investigated are: (1) the instructional time loss due to distractions, (2) the degree of disjointedness of the instructional activity, and (3) the degree to which a distraction persists after a coping strategy has been utilized. An interrupted time-series design will be used. The intervention will be a mini-inservice course. This inservice experience will inform participant teachers of functional coping techniques and will provide feedback of the techniques which each teacher is utilizing. Implications of the potential findings could have a dramatic impact upon preservice and inservice education of teachers regarding classroom organization and management.

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PROBLEM CONTEXT

In the San Diego Unified School District, much attention has been directed this year to recent studies which report the importance of students' "time-on-task" (e.g., Berliner, 1976; Stallings, 1975). The amount of time students are engaged in meaningful learning activities has caught the interest of top-level district decision makers. Regional meetings have occurred during the fall semester of 1977 to familiarize each elementary site principal with the review of literature regarding many factors involved in the acquisition of knowledge (Berliner & Rosenshine, 1977).

In theory, these site administrators will disseminate the concepts contained within the reviewed literature to their respective faculties. The importance of students spending sufficient time engaged in learning reading, math, and other academic skills was clearly articulated at these meetings. How to find (additional) time for classroom teachers to meet these time requests was not elaborated upon. Implicit was the concept of more effective classroom management (whatever that is). Reserving portions of the instructional day for reading and math instruction was discussed.

The demands placed upon teachers to maintain the flow of instruction in the context of other demands (e.g. recordkeeping for special funded projects, individualizing instruction, etc.) was likewise acknowledged. Remedies to insure that sufficient time would be available for academic instruction were few. Essentially the emphasis was upon somehow "stretching" the instructional day by replacing or deleting "unnecessary instructional topics." Few people were willing to explicate their list of unnecessary instructional topics.

Perhaps, instead of attempting to identify the instructional domains which can be displaced, efforts should be expended to research activities within the instructional day which could be handled more efficiently. There are areas of classroom management in which little, if any, systematic research has been undertaken. Some areas are too touchy to approach in this time of teacher-district negotiated contracts. Other areas exist in which the constructs involved seemed too difficult to quantify -- using solely the traditional techniques and experimental designs to which researchers have become accustomed. One domain of classroom management which relates to the erosion of classroom instructional time is that of interruptions -- or for lack of a better name, *classroom distractions**.

A researcher would have a difficult time finding a teacher who would claim that there were no distractions to her/his daily instructional plans. Likewise, researchers would be hard pressed to identify master teachers who "have all the answers" to cope with classroom distractions. One reason why teachers will openly admit that they occasionally/frequently encounter instructional interruptions is that most distractions are beyond their control (e.g., fire drills, student disagreements, an unsure student seeking reinforcement and encouragement even though the teacher is working with another set of students at the reading circle, etc.). One reason why teachers will not claim to be "master distraction copers" is that they are uncertain their "bag of tricks" is any more efficient than those of any other teacher at their school.

Teachers do not learn how to cope with classroom distractions in teacher education classes. Usually the topic of *things that you don't want to happen to you while your trying to teach* does not appear in teacher

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*For the purpose of this study, *classroom distractions* are those events which take teachers and/or students off their instructional tasks.

preparation courses. Instead, teachers learn through first hand in-front-of-the-class experiences. Occasionally, during a coffee break or a preparation period, an "old pro" might share some of her distraction-coping techniques. It seems strange that in a time in which every moment of instructional time is so precious that teachers are having to learn how to cope with distractions by trial-and-error or by asking a colleague on the sly. In addition, does the "old pro" teacher really have an efficient arsenal of techniques when compared with her peers' approaches?

The apparent reason for the dismal state of affairs seems to relate to the lack of research on the topic. Little can be found in the literature regarding a systematic study of distractions to classroom instruction. Investigations which examine the coping strategies which teachers utilize to minimize the distractions of instruction are virtually nonexistent.

If time-on-task is as important as contemporary research indicates then an investigation of the distractions which classroom teachers encounter and the techniques that are used, indeed, appears timely and desirable. The additional time gained from successful distraction-coping would apparently be more acceptable than the instructional time obtained by displacing an instructional domain (e.g., art, music, etc.), since some believe these latter domains are as essential as the academic topics.

The investigation of classroom distractions and the discovery of functional distraction-coping techniques are not sufficient ends in themselves. Some means of disseminating functional coping techniques is also needed. The research design of this proposal incorporates an inservice-feedback intervention. This intervention will provide some preliminary insights with respect to teacher receptiveness to inservice training of distraction-coping strategies.

STATEMENT OF THE QUESTION

What are the strategies which classroom teachers use to cope with distractions to classroom instruction and how effective are these strategies with respect to:

(1) Minimizing instructional time lost due to the distraction,

(2) Dealing with the distraction at a level which has a minimal disruptive effect upon the flow of instruction, and

(3) Eliminating the distraction.

REVIEW OF LITERATURE

Introduction

This section provides a very brief review of literature relevant to this proposal. Little was found in the literature regarding investigations of the impact of classroom distractions. Accordingly, references advocating courses informing teachers of functional coping techniques were nonexistent.

Studies highlighting the importance of students' engaged learning time were found (Berliner et al., 1976; Stallings, 1975). References were also found which indicated the need for continuous rather than disjointed lessons (Tikunoff, Berliner, and Rist, 1975). The need for teacher preparation courses which focus upon classroom management concerns (e.g., classroom distractions) has been voiced (Bender, 1977), but has not been found in the literature. It has been suggested by members of the San Diego IR & DT team that perhaps the experimental designs and techniques used by quantitative researchers (see Campbell and Stanley, 1963) have restricted (precluded) the investigation of subtle classroom teacher-student interactions. Some researchers are advocating that perhaps multiple perspectives of the interactions between teachers and students are needed; with quantitative data supplemented by qualitative data (Tikunoff, Berliner, Rist, 1975; Tikunoff and Ward, 1977).

Review

According to Stallings (1975), instructional time appears to be a powerful factor in accounting for acquisition of knowledge in the classroom. In a study of 150 Follow-Through classes, she concluded:

> Out of a possible 340 correlations between reading achievement and classroom processes, 118 were significantly related at the .05 level. Of these, the most strongly correlated variables suggest that the length of the school day and the average time a child spent engaged in a reading activity were related to high reading scores in both first and third grade. (p. 6)

Besides the amount of time students are engaged in appropriate learning tasks, the degree of continuity of instruction was found to be important (Tikunoff et al., 1975). It was concluded that immature learners (primary grade children) cannot thrive when choppy or disjointed lessons occur within a given instructional period (e.g., teacher switching from individual instruction in reading to behavior management, then to reading the principal's message, and then to large-group instruction in reading).

In their review of literature of causal factors in student achievement, Berliner and Rosenshine (1976) stated:

> It may be concluded that at the primary grades, more academic knowledge is acquired by students in classes where (a) the schools and teachers have advocated more time for academic instruction; (b) the time used for lessons is continuous rather than disjointed; . . . (p.15)

Dr. Steven Bender of San Diego State University was asked to describe the status of teacher preservice courses regarding classroom organization and management. Dr. Bender (1977) reluctantly admitted that presently teacher preparation classes are weighed heavily toward subject matter orientations and topics from educational psychology. Little (if any) time remains in these courses to discuss the "nuts-and-bolts problems" which new teachers will encounter in their future classrooms. Dr. Bender and Mr. Linden Courter, Director of Inservice Education for the San Diego City School District, concur that the dissemination of functional coping techniques would be well received by new, as well as experienced, teachers.

Recent literature regarding research in naturalistic settings indicates that ethnographic methodology is appropriate for investigating classrooms problem As expressed by Charlesworth (1974):

> One distinctive (but not exclusive) characteristic of the ethologist's approach is that he first undertakes to observe and describe behavior in the natural habitat before attempting to study the behavior under more controlled and artificial conditions. (p. 10)

Fienberg (1977) said, "Because ethnographic data are obtained by direct observation of human activity and interaction in an ongoing naturalistic manner, it is inherently multidimensional" (p. 50).

The features of ethnographic data collection (e.g., observing naturalistic student-teacher interactions and collecting multidimensional data), lend themselves to the proposed investigation of classroom distractions. The literature indicated that the union of quantitative and ethnographic research methods can contribute complementary dimensions. The work of Tikunoff et al. (1975) at the Far West Laboratory, for instance, has illustrated how quantitative and qualitative methods can be combined.

In summary, instructional time and continuous flow of instruction were acknowledged in the literature as important factors in the acquisition of knowledge. Comments regarding the lack of, and apparent need for, courses preparing teachers for classroom distractions (and functional coping techniques) are absent from the literature -- but are acknowledged by inservice experts.

The literature indicates that the combination of quantitative and ethnographic methodologies may provide the research methods needed to gain initial insights of how classroom teachers cope with classroom distractions.

VARIABLES TO BE STUDIED

The primary variables to be studied in this investigation are:

Time on Instructional Task

More specifically, instructional time lost by teachers and students due to distractions and the utilization of the various coping techniques.

Flow of Classroom Instruction

The degree (or lack) of disjointedness of the instructional activity due to classroom distractions. To what degree are the teacher and student completing the instructional task as initially planned by the teacher?

Elimination of the Distraction

To what degree does the distraction (or a replacement distraction) persist after a coping strategy has been utilized?

NATURE OF DATA TO BE COLLECTED

To Assess TIME

Two non-participant observers and one participant observer (classroom teacher) will collect time-related data. One non-participant observer will collect quantitative data which will document the frequency and types of distractions and coping techniques, as well as the instructional time lost due to the distractions and the coping techniques utilized. The other non-participant observer will maintain descriptive protocols* illustrating instances in which the teacher and/or students are taken off task. The participant observer will describe a sample of key events which were major distractions, and will provide a subjective indication of the proportion of instructional time lost due to the distractions.

To Assess INSTRUCTIONAL FLOW

The quantitative non-participant observer will collect data indicating the degree instructional activities were interrupted. The ethnographic observer will obtain descriptions of the breaks in the flow of instruction -- for the classroom teacher, as well as follow-up observations of selected students and their instructional efforts. The classroom teachers will augment the other observers' data with subjective evaluations of the portion of the teachers' lesson plans which were completed. The classroom teachers will also assess students' efforts with respect to classroom assignments (e.g., To what degree did students make appropriate progress with his/her daily reading task?).

To Assess the ELIMINATION OF THE DISTRACTION

Subjective ratings of the degree of elimination of the distraction will be provided by the quantitative observer. As before, the ethnographic observer will describe the context of the distraction and its elimination. Daily, the classroom teacher will indicate a sample copying strategy which the teacher believed was especially effective. The teacher will not attempt to evaluate the total set of coping techniques exercised.

(Please see the Data Collection General Schema sheet which follows)

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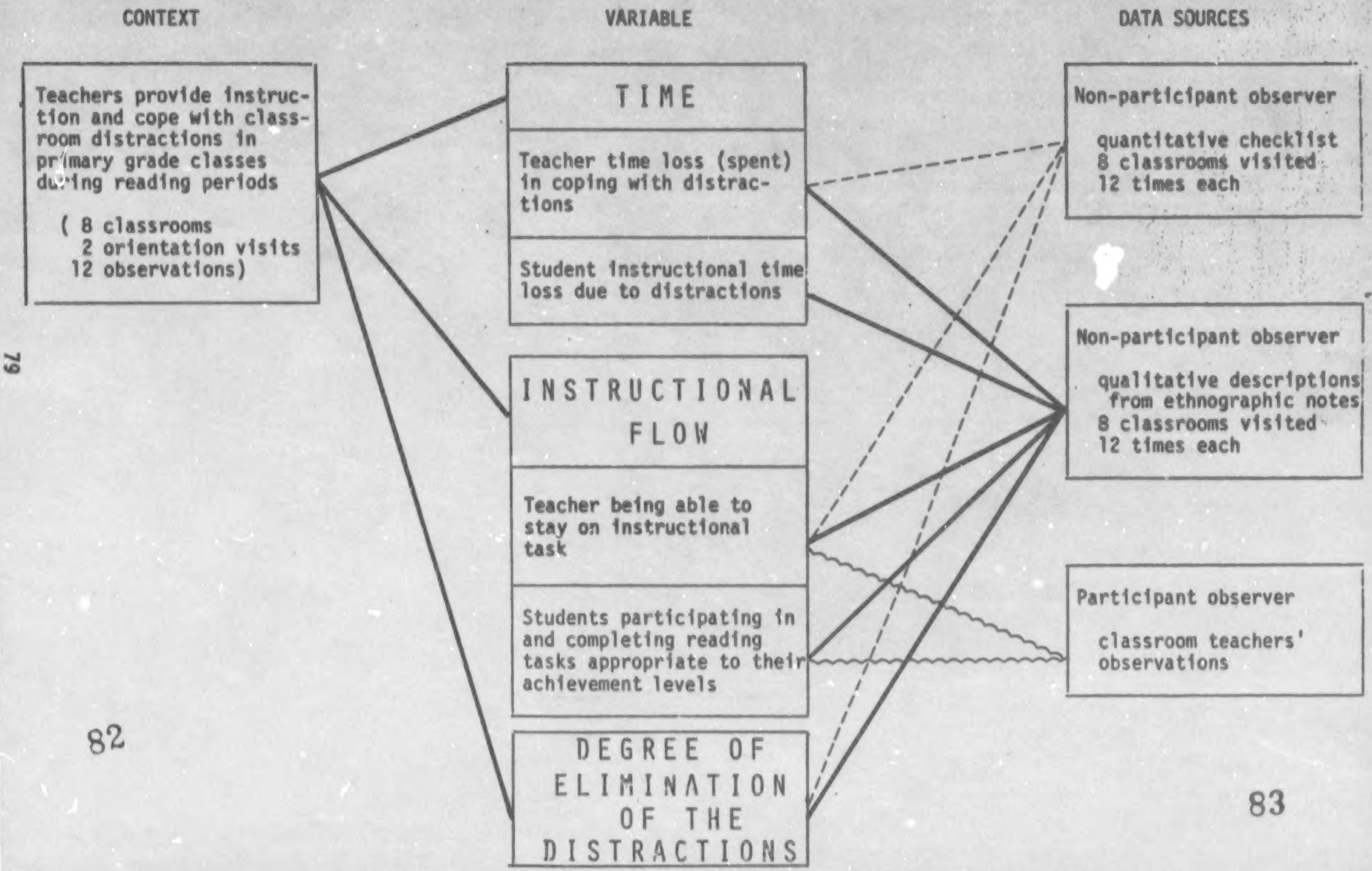
*The term, *protocol*, is used to identify typed transcripts of an ethnographer's narrative description of classroom interactions.

DATA COLLECTION
GENERAL SCHEMA



CONTEXT

Teachers provide instruction and cope with classroom distractions in primary grade classes during reading periods

(8 classrooms
2 orientation visits
12 observations)

VARIABLE

TIME

Teacher time loss (spent) in coping with distractions

Student instructional time loss due to distractions

INSTRUCTIONAL FLOW

Teacher being able to stay on instructional task

Students participating in and completing reading tasks appropriate to their achievement levels

DEGREE OF ELIMINATION OF THE DISTRACTIONS

DATA SOURCES

Non-participant observer

quantitative checklist
8 classrooms visited
12 times each

Non-participant observer

qualitative descriptions from ethnographic notes
8 classrooms visited
12 times each

Participant observer

classroom teachers' observations

PLAN FOR DATA COLLECTION

OVERVIEW OF DATA COLLECTION

Three types of observations will occur. Two non-participant observers and one participant observer will collect data from different perspectives for each of eight classrooms.

The two non-participant observers will receive training and descriptive classroom-context information prior to classroom visits. Two classroom visits will permit the non-participant observers to become oriented prior to the Observation Phase (and data collection). One of the non-participant observers will collect quantitative data using an observation checklist (see Appendix C), while the other observer will employ ethnographic techniques.

The participant observer will be the classroom teacher. The participant observations will emphasize the teacher's insights regarding a sample of the distractions and coping techniques utilized. Additional insights regarding circumstances and factors beyond overt classroom actions will be addressed. The participant observer will also provide daily descriptive information (see Appendix D)

All eight classroom teachers will receive inservice training regarding functional coping strategies as well as feedback regarding the coping techniques they are utilizing. This intervention will occur between the second and third set of observations (an interrupted time series design -- see the Observation and Intervention Pattern sheet which follows).

SUBJECTS

Teachers. Eight primary grade teachers will participate in the investigation. Half of this group has been involved in the identification of the problem and the generation of the research design (Level I teachers). The remaining four teachers will be recruited from similar grade levels and schools to provide a "less contaminated" (and less involved) comparison population (Level II teachers).

Three of the teachers presently involved are colleagues at a relatively small K-6 school with a faculty of 15. They currently teach grades kindergarten, 1 and 2. The student population is approximately 400, primarily Black (77%), with some Spanish surnamed (16%) and a few other ethnic representatives*. Approximately half of the school's families qualify for federal aid. The fourth teacher team-teaches a 3-4 grade class of 60 students in a very large K-6 school (40 teachers and approximately 1200 students). This school is located in a middle class neighborhood and has an ethnic composition primarily Anglo (78% White, 11% Hispanic, 6% Asian, 4% Black).

Key Students. In each of the eight participating classrooms, four key students will be identified for observation. These students will be selected by the IR & DT researcher and trainer based upon information provided by the classroom teachers (see Appendix B for Student Characteristics Checklist). The key students will represent various combinations of behavior characteristics (e.g., highly sensitive and easily distracted, hyperactive and reluctant to accept correction, etc.).

Non-Participant Observers. The eight non-participant observers will be employed because of their training and experience in ethnographic data collection methods in the fields of anthropology and/or sociology. Most likely they will be graduate students attending local universities.

DATA COLLECTION PROCEDURES

Orientation Phase. Prior to classroom visits, each of the eight classroom teachers will complete a classroom context questionnaire and a rating scale for each student in her classroom. The questionnaire is intended to provide descriptive information to the non-participant observers relative to classroom arrangement and management (see Appendix A). The rating scale is intended to provide insights regarding various student behavioral characteristics (see Appendix B).

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*Ethnic data from Pupil Ethnic Census, San Diego City Schools, 1976-77.

The eight non-participant observers will be divided into 4 observation teams. Each team will be assigned two classrooms to visit (see Observation Schedule). During the Orientation Phase (tentatively January 9-13), the non-participant observers will visit their two classrooms for two days each. The purpose of these visits is to familiarize the non-participant observers with the classroom arrangements and the daily management style of the classroom teacher. The observers and teachers will have opportunities to interact and clarify points which are ambiguous during this phase. The non-participant observers will become adept at identifying the key students and determining locations within the classrooms which permit effective unobtrusive observation. The non-participant observers will jointly develop a pre-observation description of the classroom environment and the teacher's teaching and distraction coping-style.

Observation Phase. The non-participant observation teams will visit each classroom on 12 occasions. The observation time interval will be during the reading period, approximately 1 hour and 15 minutes for each visit. The first eight visits will occur prior to the Inservice Phase, and the remaining four will follow the inservice intervention. Each observational team will visit one of its two classrooms for four consecutive days during a week (Monday through Thursday, generally), then the following week visit the other classroom (see Observation Schedule and Observation and Intervention Pattern sheets).

OBSERVATION SCHEDULE

TEACHER / WEEK	LEVEL I TEACHERS				LEVEL II TEACHERS			
	T_A	T_B	T_C	T_D	$T_{A'}$	$T_{B'}$	$T_{C'}$	$T_{D'}$
1	OT_A		OT_C			OT_B		OT_D
2		OT_B		OT_D	OT_A		OT_C	
3	OT_A		OT_C			OT_B		OT_D
4		OT_B		OT_D	OT_A		OT_C	
5	INTERVENTION							
6								
7	OT_A		OT_C			OT_B		OT_D
8		OT_B		OT_D	OT_A		OT_C	

T_A = Teacher A OT_B = Observation Team B

OBSERVATION AND INTERVENTION PATTERN

CLASSROOM VISITS	1ST SET OF OBSERVATIONS	2ND SET OF OBSERVATIONS	INTERVENTION	3RD SET OF OBSERVATIONS
1 2	1 2 3 4	5 6 7 8	I F	9 10 11 12

ORIENTATION PHASE

Purpose:

- context clarification
- familarize with room arrangement
- identify key students
- develop a pre-observation context description

OBSERVATION PHASE

Purpose:

- data collection

  2 non-participant observers in classrooms, 4 days per week, approximately 75 minutes per observation (one quantitative observer and one qualitative)

  Participant observer maintains records during the same days

- develop an intermediate-observation context description

INSERVICE PHASE

Purpose:

- Inservice

  overview of kinds of distractions and functional coping techniques

- Feedback

  review of individual and group profiles

POST-INTERVENTION OBSERVATION PHASE

Purpose:

- data collection

  as during the first two sets of observations

- develop a post-observation context description

During these classroom visits, the two observers will function in different and complementary manners. One observer will observe the classroom situation (focusing on the teacher) using a quantitative data observation form (see Appendix C). The other non-participant observer will utilize ethnographic observation techniques. The focus of the ethnographic observer will be upon the sequence of events and interactions between teacher and students. On those occasions when a key student has initiated the distraction, the ethnographer will follow the key student's reactions after the teacher's coping technique has been exercised.

Daily, the participant observer (classroom teacher) will note four distractions which occurred during the day's observation, as well as one coping instance. The distractions and coping technique will be noted as soon as a natural break occurs after the observation. A more detailed description of the distractions and related information will be recorded by the teacher later in the day. The teacher will also provide daily descriptive information (see Appendix D).

The quantitative observer will transform his observations to a machine-readable record form, daily. At the end of each observation, the ethnographer will dictate his notes onto tape-recorded cassettes. Later, these tapes will be transcribed by a team of stenographers/transcriptionists.

The non-participant observers will attempt to be as unobtrusive as possible. The retention of a naturalistic setting is considered of paramount importance. Clarification of distractions and coping techniques may occur between the two non-participant observers, but the classroom teacher's interpretation will not be sought.

After the second set of observations, the non-participant observers will jointly develop a intermediate-stage description of the classroom environment and the teacher's teaching and coping styles.

Post-Intervention Observational Period. Data collection procedures will continue after the inservice intervention. Four observations will be made in each classroom using the same data collection procedures. The non-participant observers will continue to observe the same pair of classrooms (see Observation Schedule). The non-participant observers will jointly develop a post-observation description of the classroom environment and the teacher's teaching and distraction coping styles.

PLAN FOR ANALYZING DATA

As noted in earlier sections of this proposal, this investigation incorporates both quantitative and ethnographic-descriptive data. The quantitative data includes frequency counts of distractions, corresponding coping techniques, and ratings of the effectiveness of the coping techniques. The ethnographic data includes descriptive protocols from the non-participant observer and the classroom teacher.

Quantitative Data. Computer programs will be written to facilitate and expedite the reduction of the quantitative data. The categorical summary of distraction/coping technique/effectiveness ratings will be transformed from the observational form to machine-readable data sheets.

Summary printouts will provide the following:

- A list of the distractions which occurred
- For each distraction, the set of coping strategies utilized will be listed

- For each distraction-coping linkage, histograms illustrating the effectiveness of the coping strategy will be displayed ("Time" expended by the distraction and resolution of the distraction; the degree of interruption of the "Flow" of instruction; and the degree of "Elimination" of the distraction)

(A sample of a printout is provided in Appendix E)

These printouts will be obtained for each teacher separately and aggregated for the group. Besides the descriptive statistics provided -- which are also intended to be used during the intervention inservice -- inferential statistical calculations are intended. Contrast between teachers who have been involved in the IR & DT planning (Level I teachers) and those teachers who have not been included (Level II teachers) is planned. Comparisons between pre and post-intervention frequencies are also planned.

In conjunction with the other two observers' data, the quantitative data will illustrate the amount and variety of distractions and coping techniques. The relative effectiveness of the various coping techniques will be described.

Ethnographic Data. The primary use of the ethnographic data will be to compile case studies of the teachers' behaviors in coping with classroom distractions. In addition, interpretative summaries regarding each classroom and comparisons between and among classrooms, teachers, grade levels, and students will be prepared using the "raw" ethnographic data.

The pre, intermediate, and post-observational descriptions prepared by the observational teams will provide descriptive illustrations of changes of teacher coping styles.

The transcribed non-participant ethnographic records will be reviewed by the ethnographers to excerpt evidence and prepare statements for each classroom concerning:

- The most and least disruptive days, and the conditions and circumstances which contributed to the number of distractions.
- The teacher's pattern or style for coping with varying types of distractions.
- Instances of appropriate and inappropriate distraction-coping linkages.
- The types of coping techniques which the teacher used dependent upon the key student's characteristics.
- The key students' patterns of behavior (after a distraction which they had initiated has been coped with by their teachers).

Samples of the transcribed non-participant ethnographic records and the quantitative summaries will be reviewed by the classroom teachers. The teachers will extract from these data instances to illustrate and compare:

- The differences and similarities of coping techniques between the teachers involved in the development of the IR & DT question (Level I teachers) and the other four teachers (Level II teachers).
- The differences in coping techniques used before and after the inservice intervention.

The transcribed non-participant ethnographic records and the participant observer records will be reviewed jointly by the IR & DT researcher and trainer, and a qualified ethnographer who has not participated in the classroom observations. They will seek to identify:

- Patterns or types of distractions identified in the two sets of of records.
- Instances of distractions and coping identified by non-participant observers but not participant observers, and visa versa.
- Patterns of distractions which seem to relate most directly with classroom organization and management.

It is anticipated that additional avenues worthy of analysis and description will be identified once the additional teachers (Level II teachers) and the non-participant observers have been identified. In addition, the insights which the IR &DT National Advisory Panel contribute will likely modify this proposal.

STATEMENT OF EXPECTED OUTCOMES

Below are sample outcomes which are expected to be obtained upon analysis of the data:

I. A variety of coping techniques will be exercised such that:

   - Disparate coping techniques will be utilized with children at different grade levels
   - Disparate coping techniques will be utilized with different kinds children (e.g., hyperactive and easily distracted vs. highly sensitive and reluctant to accept corrections)
   - Disparate coping techniques will be utilized in different classroom contextual situations (e.g., small group interruptions vs. distractions during transitions between reading groups)

II. Teachers who have been involved in the identification of the IR & DT problem and formulation of the research design (Level I teachers) will use a greater variety of coping techniques than Level II teachers during the Observation Phase.

III. After the inservice-feedback intervention, teachers (Level I and Level II) will use a greater proportion of coping techniques which have been identified as functional, and fewer coping techniques which are identified as less effective. Some ineffective techniques will be discontinued completely after inservice.

IV. All Level I and Level II teachers will incorporate new coping techniques which will:

   - Save instruction time (teacher and student) which might normally be expended by distractions
   - Decrease the severity of instructional-flow disruptions
   - Increase the proportion of distractions which are functionally eliminated

V. All Level I and Level II teachers will become more cognizant of subtle distractions which are occuring within their classrooms and will implement a greater variety of functional preventative coping techniques.

VI. All Level I and Level II teachers will become more aware of classroom organization and management patterns which tend to minimize potential distraction situations.

The following appendices were included in the original training proposal.

They are part of Appendix B in this report.

IR & DT STUDENT CHARACTERISTICS CHECKLIST

Student Name

Make a single check (✓) on each of the continuums given below.

SENSITIVITY

HIGH	MODERATE	LOW
Student very sensitive to comments by others - on occasions may even be moved to tears	Occasionally this student may become upset by comments or actions of others	Student is never apparently upset by others or circumstances

HYPERACTIVITY

HIGH	MODERATE	LOW
Can not stay on a activity for more than a few minutes; can hardly sit still	Can generally stay involved in an activity (if not distracted) for the time needed to complete the task	Student will work at an activity until told to move to another

EASE OF DISTRACTION

HIGH	MODERATE	LOW
Student is distracted by the slightest noise or movement - inside or outside the classroom	Occasionally this student is distracted by events which would distract most classmates	Student is almost never distracted by events - almost oblivious to distractions

WILLINGNESS TO ACCEPT SUGGESTIONS/CORRECTIONS

HIGH	MODERATE	LOW
Student very receptive to comments by others - will immediately accept recommendations and act accordingly	Generally is willing to accept recommendations but will hold position if student feels in the right	Student very reluctant to accept recommendations; on occasions may become argumentative or belligerent

DEGREE OF ACCEPTANCE BY PEERS

HIGH	MODERATE	LOW
Well liked by almost all classmates - gets along well with most everyone	Liked by many classmates, but not considered as one of the most popular students	Does not associate with many of his classmates; almost an isolate

ACADEMIC RANK (READING)

Highest in the class	Lowest in the class

GB:jf
11/17/77

Quantitative Observation Scale

TIME		GRP.	KEY	DISTRACTION						COPING TECHNIQUE					EFFECTIVENESS OF COPING TECHNIQUE														COMMENTS
				REGULAR			IRREG.		SUB-CODE	PREVENT		ONGOING		COPING CODE OR DESCRIPTION	TIME OFF TASK					FLOW OF INST.					ELIM. OF DIS				
EVENT	START	I/S/L/T		ST.	SCH	OUT	IN	OUT		RULE	DIV	VERB	NV		<5	<10	<20	<40	>40	1	2	3	4	5	1	2	3		

CLARIFICATION OF COLUMNS

TIME		GRP.			KEY	DISTRACTION						COPING TECHNIQUE					EFFECTIVENESS OF COPING TECHNIQUE														COMMENTS
						REGULAR			IRREG.		SUB-CODE	PREVENT		ONGOING		COPING CODE OR DESCRIPTION	TIME OFF TASK					FLOW OF INST.					ELIM. OF DIS				
EVENT	STOP	I/S	L	T		ST.	SCH	OUT	IN	OUT		RULE	DIV	VERB	NV		<5	<10	<20	<40	>40	1	2	3	4	5	1	2	3		
		I = INDIVIDUALIZED 1 ≤ I ≤ 3 S = SMALL GROUP 4 ≤ S ≤ 12 L = LARGE GRP. 13 ≤ L			CODE FOR KEY KID (e.g., MAM = MJ)												DURATION OF DISTRACTION – THE TIME THE TEACHER IS OFF TASK (WITH RESPECT TO WHAT SHE HAD BEEN DOING)					NO APPARENT BREAK IN INST. FLOW (TEACHER OR STUDENT)	DISTRACTION MAINLY TO TEACHER / DOESN'T BOTHER KIDS	MINOR DISTRACTION TO BOTH TEACHER AND MOST STUDENTS IN GROUP	INSTRUCTION DISRUPTED, BUT TEACHER BRINGS GROUP BACK TO TASK	INST. COMPLETELY DISRUPTED, VERY DIFF. OR NOT POSSIBLE TO BRING GROUP BACK.	APPARENT ELIMINATION OF DISTRACTION	DISTRACTION CONTINUES (AT A REDUCED LEVEL)	DISTRACTION CONTINUES AND TEACHER USES ANOTHER TECHNIQUE		

TEACHER DAILY RESPONSE FORM

During your tape summary of your reading period for today, please respond to the questions below (in the order they are asked). Feel free to include additional factors and conditions which may be of assistance in clarifying the context of your reading instruction today. Please focus your remarks to the time interval when reading instruction was occurring

(1) Description of classroom environmental conditions which may have affected reading instruction and/or distractions.

(2) Your appraisal of your mood and physical condition for today.

(3) General assessment of today's instruction experience (one paragraph -- e.g., "Today everything went perfectly, ...").

(4) To what degree did you accomplish those reading instructional tasks which you had planned?

(5) Additional comments and clarifications of the distractions and coping technique which you noted earlier today (please clearly distinguish your comments -- e.g., "For distraction #1,I ...").

(6) Were there any changes in your coping techniques today? Why?

(7) How much time (minutes) of your reading instruction was lost today due to distractions?

(8) Look down the list of names of the students in your class. Each time something is triggered in your mind concerning what transpired with that student during reading instruction today, describe it. Each time a student's name triggers a distraction, talk about it.

(9) Other comments

SAMPLE OF QUANTITATIVE DATA PRINTOUT

DISTRACTIONS

D1. Student Disagreements
(17 instances)

D2. General Student Noise
(22 instances)

D11. Student Seeking Teacher
Approval

COPING TECHNIQUE

C[illegible]. Direct Commands
(7 instances)

C8. Sending Students out of
the classroom
(6 instances)

C14. Directing students to
another person
(4 instances)

C9. Hand Motions
(4 instances)

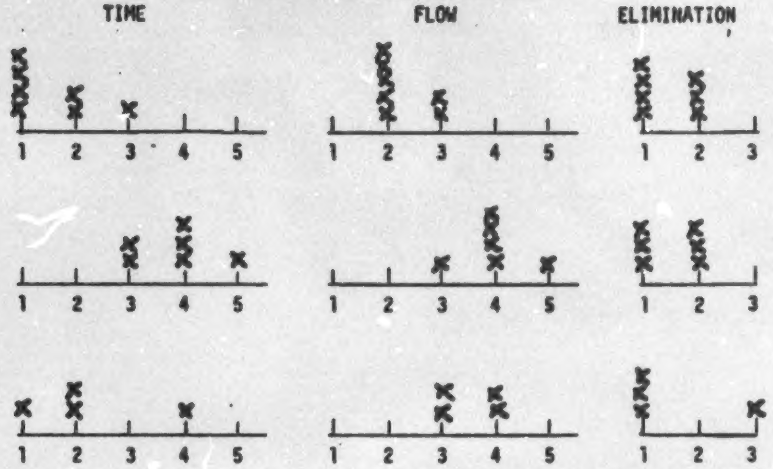
C14. Turning Lights Off
(other attention getters)
(13 instances)

C16. Pausing or Waiting
Techniques
(5 instances)

C3. Complimentary Techniques

C7. Gestures

EFFECTIVENESS OF COPING TECHNIQUE



ETC.

APPENDIX C

Correspondence Regarding Final Research Design

SAN DIEGO CITY SCHOOLS

APPENDIX C

EVALUATION SERVICES
EDUCATION CENTER
4100 Normal St. San Diego, Ca 92103
(714) 298-4681

January 23, 1978

Betty Ward
William Tikunoff
Far West Laboratory
1855 Folsom Street
San Francisco, CA 94103

Dear Betty and Bill:

I am writing to finalize the San Diego IR & DT Team's Research Design (due January 15 -- as indicated by Activity 7 of the new workscope). The format of the modifications to the preliminary proposal (submitted December 5, 1977) is as I discussed with you during our phone conversation January 2.

Cindy, myself and the other team members (after listening to the cassette tapes) agree that the National Advisory Panel members are insightful, helpful and experienced researchers. The input from N.A.P. members has been very useful in helping/making us clarify our thinking. Obviously, we could not incorporate all of the panel's suggestions -- hence, the remainder of this correspondence is directed to the changes which we have chosen to (or not to) include in our study.

In general, we have done the following:

(1) focused our question and observation,
(2) deleted some dimensions of our proposal (due to N.A.P. suggestions and budgetary priorities),
(3) clarified the amount of interaction between the observers which will be permitted,
(4) added an unobtrusive observation technique, and
(5) determined the modifications needed in our instrumentation

More specifically, our modifications are:

(1) FOCUS

- no "key student" dimension (anymore)
- selected observations
    - attention to the teacher and the group which she is working with
    - attention given to specific time "slices" (see rough diagram attached)
    - less "total information" sought from the participant observer -- instead, focusing questions to a couple of distraction-coping linkages (one good, one bad)

(2) DELETIONS

- (see "Focus" comments)
- three fewer observations (9 instead of 12)
- no attempt at inferential statistical analyses

(3) CLARIFICATION

- non-participant-to-participant observer communications will be none
- non-participant observer communications between each other will be limited to minor clarifications (and only when essential)

(4) OBSERVATION TECHNIQUE

- a wireless mini-microphone will be used to pick-up quiet teacher-student interactions

(5) INSTRUMENTATION CHANGES

- major modifications to Appendix A and Appendix D (due to "Focus")
- Appendix B deleted (since no key kids)
- Appendix C is being modified to be more sensitive to time and context

In addition to the above modifications we have decided to continue with our plans for (1) two orientation days for observers (before data collection), and (2) an intervention/feedback interval.

Additional details will be provided to you at a future date or upon your request for clarification.

Sincerely,

Grant Behnke

Grant Behnke
Program Evaluator

GB:lf

APPENDIX D

Teacher Daily Log Questions
and Sample Log

APPENDIX D

TEACHER DAILY RESPONSE FORM

During your tape summary of your reading period for today, please respond to the questions below (in the order they are asked). Feel free to include additional factors and conditions which may be of assistance in clarifying the context of your reading instruction today. Please focus your remarks to the time interval when reading instruction was occurring.

1. General assessment of today's instructional experience (e.g. today everything went well because...) were you satisfied with how much of your plans you accomplished and why?
2. Description of classroom environmental conditions which may have affected reading instruction and/or distractions (e.g. weather, special events, etc.)
3. Today what was your most successful distraction/coping technique and why. (During reading)
4. Today what was your least successful distraction/coping technique and why. (During reading)
5. Were there any changes in your coping techniques today? Why?
6. Comment on your mood and physical condition for today.
7. Estimate how much time (in minutes) of your reading instruction was lost today due to distractions.
8. Look down the list of names of the students in your class. Comment on any event, which occurred outside the reading period, which might effect future reading instruction (e.g., teacher reminded student that field trip participation depended on good behavior).
9. Other comments.

SAMPLE TEACHER RESPONSES TO DAILY LOG

Teacher Number:
Student Number:
Date of Observation: 4-11-78
Researcher Number:
Protocol Number: 7th observation

Q.1 General assessment of today's instructional experience. Today everything went pretty well. I accomplished my plans but I am afraid that while accomplishing the plans I did develop a headache and that's due to some distractions which I will explain in question number two.

Q.2 Today we had distractions, a different type of distraction. I knew that some men were coming some time but did not know that today would be the day. Today there were men outside our windows, taping the doors, taping the windows, they were preparing our walls to be replastered. And to say the least I didn't know for sure what they were doing, didn't expect them to be there so wasn't quite sure what to tell the children and of course the children were distracted. We discussed finally what I thought they might be doing and we talked about how we wouldn't let that bother us, that we would continue.

Q.3 My most successful coping technique today. I used my signal technique with E. I have been using the technique with E for about a week. I thought possibly my signal technique was running out, that it had lost its excitement and its effectiveness. It did not work too well yesterday, but today it did work. I kind of sloughed off and after a couple of times using this tactic I said ah this isn't working well I have got to think of something new. Well today I tried it anyway and I found that it did work with E. It keeps me from having to keep calling his name out, bringing attention to his bad behaviour and it is a positive way to let E know that he is not behaving like he should be and it doesn't distract everyone else that is trying to do their reading with me.

Q.4 Today my least successful coping technique was I always think that this is a difficult question to answer and I am sitting here thinking for a while and I am thinking that probably my most unsuccessful coping technique today was I prefer to use the nonverbal, today I found it difficult to get eye contact with many of my children and I think this was due to the distraction of the workers outside replastering the walls and also it has been, oh three weeks at least, since we have had observors in our room and that was a bit of a distraction too, so today the children were easily distracted and in order to get the signal technique to work you have to get their attention first and that was difficult today.

Teacher Number:
Student Number:
Date of Observation:
Researcher Number: 4-11-78
Protocol Number:

Q.5 Were there any changes in my coping technique today. This is a difficult question to answer also. As I am sitting here thinking were there some changes in my coping techniques, yes, there have been some changes in my coping techniques since the last observation that was made and the last evening taping that I have done. I am now using the signal technique with two of my children. So it is not new for today but it is new since our last observation. So that should show up on our observation. And why have I been using it, because it has been working.

Q.6 Comment on your mood and physical condition for today. I was very rushed this morning. I had a lot to do and was running short of time, so I did come into the room with a bit, I could sense I was going to have a headache. I started to take some aspirin before I came and thought on no I am not going to get a headache and its dumb to take aspirin its not good for you and so I didn't. And then to come in and have the distraction of the men outside working, I did develop a headache. So that's my physical condition for today. I am feeling better now.

Q.7 How much time of my reading instruction was lost today, due to distraction. Ooh, well, at least five maybe, hm, at least five minutes could have been eight, something like that.

Q.8 I am going to look down the names of my students in my class and comment on anything that might affect reading instruction time. I already have discussed with you that I have been working with E and M with a new signal technique. I had a conference with both of them, discussed with them that they have been working very well since I have been calling their mamas but I was thinking of a new method that might help them to be even better citizens and I told them that we had a secret all to ourselves and that E 's special signal was that I would pull on my ear when he wasn't listening or doing his best work and M 's secret signal would be winking my eye at him and I have been using these oh for at least a week maybe a week and a half and I find that it has been most effective. The children are listening and they are smiling when I do this to them, they aren't going, you know, "Mrs is bothering me again." I do wonder how long the effectiveness of this is going to last.

APPENDIX E

Distraction Classification System

APPENDIX E

DISTRACTIONS TO CLASSROOM INSTRUCTION

REGULARLY OCCURRING			IRREGULAR OCCURRING
STUDENT GENERATED	**SCHOOL GENERATED**	**OUT-OF-SCHOOL GENERATED**	**WITHIN CLASSROOM**
11. Students verbally interrupting the teacher	21. Sensory distractions	31. Pre-announced visitors	41. Unexpected visitors
12. Student seeking clarification	22. Student movement due to out-of-classroom activities/programs	32. Special project-related activities (testing, recordkeeping)	42. Communications to the teacher
13. Student-student interactions which are disruptive	23. Clarification of instruction needed by others (non-students)	39. Other	43. Unexpected arrival or departure of students
14. General student noise	24. School management-related activities		44. Misc. student problems
15. Students not concentrating on classroom activities (not on task)	25. Teacher creates distraction		49. Other
16. Student's physical position or location	29. Other		**OUT-OF-CLASSROOM**
17. Student intentionally attempting to disrupt instruction or challenge rules			51. Upset parent visit
18. Physical disorders to the classroom environment or to students			52. Last moment activities (field trip, assembly, etc.)
19. Other			53. Speakers
			54. School photographs
			55. Student elections
			59. Other

DISTRACTIONS

REGULAR OCCURRING DISTRACTIONS

STUDENT GENERATED

11. *Student verbally interrupting the teacher*

    Students seeking approval
    Students telling of other students bothering them
    Students poking or touching teacher
    Misc. student questions (restroom, feeling ill, etc.)

12. *Student seeking clarification of task*

    Student asking teacher "how to do it"
    Raising and waving hands seeking help

13. *Student - student interactions which are disruptive*

    Student disagreements
    Unorderly sharing (lack of respect for other students while they are trying to share)
    Student discussions which are not related to the instructional task
    Students pushing, shoving, hitting, etc. each other

14. *General student noise*

15. *Students not concentrating on classroom activities (not on task)*

    Students not listening or following instructions (having to repeat instructions)
    Students do not have materials (which they should have -- e.g., pencil)
    General student foolishness and clowning around
    Students playfully running, crawling

16. *Student's physical position or location*

    Wandering students (wasting time)
    Student posture/seating
    Wiggling

17. *Student intentionally attempting to disrupt instruction*

    Student repeating instructions (disobediently -- seeking peer recognition)
    Students attempting to redirect class activities (move the teacher off the subject)

18. *Physical disorders to the classroom environment (e.g., spilt paint, student dragging earphones) or to students (e.g., wet pants, emotional tears, etc.*

19. *Other*

SCHOOL GENERATED

21. *Sensory distraction*

    Bells
    Fire drills
    Gardening activities (noise and visual distractions)
    Visual distractions of students or others passing by the classroom windows

22. *Student movement due to out-of-classroom activities/programs*

    Media center and library visits
    Pullout programs

23. *Clarification of instructions needed by others (non-student)*

    Aides/parent volunteers seeking additional instructions or clarification
    Teacher giving instructions to aide or parent (teacher initiated)

24. *School management-related activities*

    Attendance folders
    Assemblies
    Preparation for open house

25. *Teacher creates distraction*

29. *Other*

OUT-OF-SCHOOL GENERATED

31. *Pre-announced visitors*

    Parent visits
    V.I.P visits (announced)

32. *Special project related activities (testing, recordkeeping)*

    Recordkeeping for special funded projects
    Special project testing

39. *Other*

IRREGULAR OCCURRING DISTRACTIONS

WITHIN CLASSROOM

41. *Unexpected visitors*

    Nurse visits and clinical testing
    Custodian delivery and pickup
    Principal visitation
    Important visitors (unannounced)

42. *Communication to the teacher*

    Notes and messages from other staff members
    Announcement of emergency meeting after school
    Requests (from principal or staff) for teacher to participate in an after school presentation (or a special presentation to a group)

43. *Unexpected arrival or departure of students*

    Family emergency (teacher or student)
    Receiving new students

44. *Misc. student problems*

    Students losing lunch tickets or money (or lunch)
    Inquiry to student on playground
    Sudden student illness (in class or playground)

49. *Other*

OUT-OF-CLASSROOM

51. *Upset parent*

52. *Last moment field trip*

53. *Speakers*

54. *Photographs*

55. *Student elections*

56. *Other*

APPENDIX F

Coping Technique Classification System

APPENDIX F

COPING TECHNIQUES

ONGOING TEACHER ACTIONS		PREVENTATIVE AND/OR PREPLANNED
VERBAL	NONVERBAL	
11. Teacher giving direct command or instruction (telling) 12. Teacher complimenting positive behaviors or actions -- as an example of acceptable activities 13. Teacher clarifying or reminding students of rules (How it should be) 14. Teacher soliciting students to a behavior change by using varying voice techniques 15. Teacher using varying patterns or clues to gain student attention 16. Teacher directing student to another person or location 17. Teacher putting distraction on hold 18. Teacher telling how a task can be accomplished 19. Other	21. Teacher using body language, gestures and/or facial expressions 22. Teacher moving or locating self with the classroom 23. Teacher physically redirecting students' attention 24. Teacher calling attention to inappropriate behavior (signs, bells, etc.) 25. Teacher ignoring distraction (after exhibiting awareness of the distraction) 26. Teacher showing how a task is supposed to be done 27. Teacher physically resolves distraction ("fixes it") 29. Other	31. Reminding students of rules to prevent distractions from happening 32. Locating material or arranging classroom environment to reduce/prevent distractions from happening 33. Teacher using positive reinforcement techniques to encourage future appropriate behavior/actions 34. Teacher using other adults in the classroom to cope with or to prevent distractions 35. Class discussion of events which are yet to occur or of non-functional events which were disrupted 36. Teacher using students to help resolve distractions 39. Other

COPING TECHNIQUES

ONGOING TEACHER ACTIONS

VERBAL

11. *Teacher giving direct command or instruction (telling)*

Redirecting student's attention by calling his name or catching his attention
Direct commands
Calling for class attention (e.g., "all eyes up")
Calling on an inattentive student

12. *Teacher complimenting positive behaviors or actions -- as an example of acceptable activities*

Complimentary techniques (e.g., "Look how nice row 2 is ...")

13. *Teacher clarifying or reminding students of rules (how it should be)*

Questioning technique (e.g., "Children, why am I not answering Johnny?"
Making judgement of "what is fair" (clarifying existing classroom rules)
Directing the students to raise their hands (if they wish to share or have a question)
Reminding students of "rules"
Threats (e.g., "If you don't ___, I will ___")

14. *Teacher soliciting behavior change by using varying voice techniques*

Voice inflection (e.g., loud/soft, harsh/gentle)
Hesitating or stopping in a sentence (or in the middle of a sentence) until students attention is regained -- [could be called a nonverbal technique]

15. *Teacher using varying patterns or clues to gain student attention*

Verbal clues of teacher's mood or health (e.g., "Today I'm in a grouchy mood", "I've got a cold today")
Requesting students to use a "calming technique" (e.g., "Take a slow deep breath", "Put your heads down")
Motivating into appropriate actions ("Get to the rug by the time the song is over")
Counting to bring the class to order (e.g., "I'm counting, 1,2,3, ...")
Kidding - joking techniques (e.g., mimicking a whinning child)
Reading to group (e.g., after recess to calm-down)
Dismissal techniques (to lunch, recess, home)
Management songs

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16. *Teacher directing student to another person or location (verbal)*

    Sending student out of classroom
    Dismissal techniques (to lunch, recess, home)
    Directing the student to another person (e.g., "go to the principal")
    Directing the student to sit at another location (e.g., go sit in the corner")

17. *Teacher putting the distraction on "hold" (e.g., "Ill be there in a second")*

18. *Teacher telling how a task can be done (clarifying it)*

19. *Other*

NONVERBAL

21. *Teacher using body language, gestures and/or facial expressions*

    Facial reactions
    Descriptive gestures
    Eye contact
    Gestures
    Signals - hand motions (e.g., "zipper lips")

22. *Teacher moving or locating self within the classroom*

    Location of teacher (e.g., standing back, physically separate)
    Teacher moving around the classroom ("making rounds")
      - during large group instruction
      - during transition periods
    Position of teacher's body (back to wall, eyes toward class)

23. *Teacher physically redirecting students' attention*

    Touching of students
    Redefine students' attention by removing objects

24. *Teacher calling attention to inappropriate behavior*

    Writing student names on board
    Turning lights off
    Ringing bells or other attention getters
    Pausing or waiting techniques
    Signs (e.g., Lucy sign "It's too noisy in here")

25. *Teacher ignoring distraction (after exhibiting awareness of the existence of the distraction)*

26. *Teacher showing how a task is supposed to be accomplished*

27. *Teacher physically resolves distraction (e.g., fixes it, does it herself, goes and gets the materials)*

29. *Other*

33. *Teacher using positive reinforcement techniques to encourage future appropriate behavior/actions*

Good citizenship awards for good behavior
Communication with parents (phone, notes, conferences) of acceptable and expected behavior

34. *Teacher using other adults in the classroom to cope with or prevent distractions*

Use aides to:
- Check students' work and correct problems
- Circulate to be sure students are on task
- Maintain records
- Filter "lower level" classroom/out-of-classroom distractions
- Working with individuals who are having learning problems
- Playground supervision
- Lunchtime supervision
- Communicate standards and rules to substitutes

35. *Class discussion of events which are yet to occur or of non-functional events which were disrupted*

Helping students anticipate what is going to happen (e.g., "Now when we go on the field trip, when we get on the bus . . .")
Asking a class to evaluate a non-functional experience (e.g., "Class, why do you think the classroom burned down today?")

39. *Other*

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APPENDIX G

Final Workscope

APPENDIX G

WORK SCOPE

Implementation of Interactive Research and Development on Teaching
at the
San Diego Unified School District
(Phase III)

I. OVERVIEW

Under funding from the National Institute of Education, the Far West Laboratory for Educational Research and Development contracted with the San Diego Unified School District to implement Interactive Research and Development on Teaching. This is a project funded in three phases in order to be concomitant with NIE funding. Phase I was the period of performance from September 1 through November 30, 1977. Phase II was the period between December 1, 1977 and May 31, 1978. Phase III is the period between June 1 and November 30, 1978. This Work Scope statement is for Phase III and describes the continuation of work to be performed as well as the deliverables due during this period of time.

It should be noted that a statement of rationale for selecting the San Diego Unified School District prefaced the Phase I contract.

The central defining characteristic of Interactive Research and Development is that the intended users of educational R&D are involved in the total research process, rather than merely being the recipients of a finished package handed to them or imposed on them. Potential benefits claimed for Interactive Research and Development include:

(a) greater relevance to existing problems in the classroom setting;

(b) collapsing of the time involved in reaching application of research outcomes, along with the associated reduction in costs;

(c) more reality-based procedures for implementation;

(d) greater motivation or acceptance of R&D outcomes by the intended users on the basis of an awareness that their perspective was represented in the R&D process; and

(e) benefits integrally associated with the R&D process to the immediate participants.

Interactive R&D proposes that putting together teachers, researchers, and teacher trainers to form a research team, each having parity, will result in interactions that will yield more useful research findings for teachers. At the same time, teachers and teacher trainers will work together to produce training strategies based on research findings and methodology.

II. PURPOSE

There are two components of this study. The first is to implement Interactive R&D at the San Diego Unified School District. The second is to study the effects of Interactive R&D on the participants, the institutions and on the R&D process itself.

A. Implementation of Interactive R&D on Teaching

The purpose of Interactive Research and Development on Teaching (IR&DT) is to inquire into teaching/learning problems based directly on the concerns expressed by teacher participants and to develop teacher training processes and procedures which grow out of the research process itself. This inquiry will be carried on by a team composed of a researcher, developer (whose primary professional responsibility is the professional development of teachers) and at least one elementary school classroom teacher. They will collectively participate in the determination of the problem area to be studied, formulation of the question to be asked and nature of the data to be collected, selection of research methodology to be used, collection and analysis of the data, reporting of findings, and the concurrent design and implementation of training procedures growing from the research findings as well as from the research process itself.

B. Study of Effects on R&D Process, Participants, Institutions

Concurrently with the implementation of the inquiry described above, a study of the implementation process and effects of IR&DT will be conducted by the staff of the Far West Laboratory. This study will concentrate on: (1) the implementation and the effects of the IR&DT strategy, i.e., the nature and degree of "interactiveness" in decision-making, changes in participants, changes in the institutions which have representatives on the team, and changes in the ecology of the classrooms of participating teachers; and (2) the research and development outcomes, i.e., the extent to which the requirements of rigorous, scientific inquiry are met, the contribution of the research to new knowledge about teaching and learning, the applicability of this knowledge in the classroom, and the training processes and procedures which utilize the research findings and methodology and the learning activities that are designed/redesigned to incorporate research findings.

III. ACTIVITIES

During Phase I, six activities were initiated by the IR&DT team. These were:

Activity 1: Participation in Orientation;
Activity 2: Provision of Input to Implementation Study;
Activity 3: Generation of the Research Question;
Activity 4: Selection of Data Sources and Data Collection Procedures;
Activity 5: Preparation of Research Design;
Activity 6: Preparation of Inservice Training Report.

During Phase II, three additional activities were undertaken by the IR&DT team. These were:

Activity 7: Finalize Research Design;
Activity 8: Collect Data;
Activity 9: Prepare Training/Development Design

Appropriate deliverables were prepared and submitted on time as described in both Phase I and Phase II contracts.

The following activities are to be accomplished during Phase III and are the focus of this Work Scope:

Activity 2: Continue to Provide Input to Implementation Study

In addition to continuing with team activities re IR&DT, the team will continue to provide FWL staff with data pertinent to the study of the implementation of IR&DT through audio tapes of all meetings, personal logs, interviews, records of communication, responses to questionnaires, and any additional means initiated by the FWL staff. In addition, the IR&DT team will participate in site visits by FWL staff which will include team meetings, classroom observations, interviews, etc.

Activity 10: Analyze and Interpret Data (June 1 to August 31, 1978)

On November 30, 1977, the IR&DT team submitted their research design to the FWL as one of the deliverables for Phase I. As part of Phase II activities, this was reviewed/critiqued by the National Advisory Panel, and the team responded successfully to their questions. Subsequently, data collection took place during the remainder of Phase II and have been prepared for analysis.

During Phase III, the team will be responsible fo analyzing data and interpreting them. Such activities are dependent upon the form and content of the data; therefore, specific procedures to be adhered to cannot be prescribed ahead of time. However, interactions of all team members in relation to this activity are expected minimally to adhere to two IR&DT principles: (a) It is expected that all team members will be involved in data analysis. This ensures that each of the perspectives of the constituents on the team representing teachers, researchers, and trainer/developers will be included; and (b) It is assumed that all three of these perspectives--and therefore all team members-- will contribute to interpreting data and identifying findings. This ensures that research findings are more apt to be communicable and useful to teachers and trainer/developers as well as to the research community.

In addition, it is expected that as a part of this activity, all team members will contribute to writing parts of the Final Report of the Research. Thus, teachers on the IR&DT team minimally will be primarily responsible for the production of case studies for themselves and the teacher with whom they were paired for research. This includes participation with those teachers and others in the analysis and interpretation of data, and writing the case study which will be a part of the final report. The researcher will be responsible for the overall coordination of this activity, and in addition will assume primary responsibility for writing the following sections of the Final Report:

(1) an introduction describing the nature of the questions asked and their relevance to teachers as depicted in the research literature as well as reported by other teachers during initial investigatory activities of the IR&DT team;

(2) a description of the sample of teachers and students included in the research, and the process used for selection;

(3) a thorough description of the methodology used, including data sources, data collection methods, reliability of data collectors and how achieved;

(4) a thorough discussion of the research methodology used. This should include but not necessarily be limited to data sources; data collection procedures used; selection and training of data collectors, and how reliability of data collected was established; a description of the data sets; how the data were analyzed and interpreted;

(5) a discussion of the comparisons between and among the teachers in the study based on aggregated data for all teachers;

(6) a discussion of conclusions drawn by the IR&DT team about the findings, how they might be applied by teachers in their classrooms, and any recommendations for either future research in relation to the research area or use of IR&DT methodology for conducting such research.

While the above description delineates the chapters in a typical research report, the IR&DT team is open to establishing their own procedures for organizing and reporting the details. This list is meant to serve only as those things minimally which should be included in such a reporting of the research. Again, it is expected that all team members will participate and contribute to these sections of the Final Report although the researcher will be responsible for overall supervision.

It is understood that this activity will encompass much of the team's time during the summer months, but that the documents which compose the Final Report of the Research will not be delivered until November 30, 1978. This will allow for time to edit and polish the various component pieces of the report, prepare them for publication, publish them, and deliver them to the FWL.

Activity 11: Conduct Training/Development Activities (June 1-November 30, 1978)

As a deliverable of Phase II, the IR&DT team completed a training/development design and submitted it to FWL for review/critique by the National Advisory Panel. The NAP's comments were synthesized and reported to the team. As an initial activity for Phase III, the team is expected to prepare a response to four questions raised: (1) Is the training feasible given time and money limitations? (2) Whey were the qualitative data collection and analyses aspects of your research study omitted from training? (3) Do you expect participants to change their behavior in just 10 sessions over 5 weeks? (4) How will participants be selected?

This response is due to the FWL as a deliverable by June 30, 1978 before training activities are to commence.

During Phase III, the IR&DT team will conduct training/development as designed, paying particular attention to: understanding and carrying out objectives as stated; designing and developing activities and materials to implement successfully those objectives, including the necessary pilot testing of new and unusual procedures or untested materials; designing and implementing appropriate evaluation procedures for ensuring that objectives are met; and conducting training/development with a selected group of teachers. While the trainer/developer is expected to assume major responsibility for this activity, all team members are expected to participate and contribute to designing and carrying out the activity.

It is understood that the exact time when training/development will occur is contingent upon attendant circumstances, and therefore cannot be determined and specified ahead of time. However, it is expected that training/development will take place within a time frame that allows for adequate time for interpreting results and for preparing and writing the Final Report of Training/Development.

Activity 12: Write Final Report of Training/Development (Sept. 1-Nov. 30, 1978)

The IR&DT team will submit to FWL by November 30, 1978 a Final Report of the Training/Development. It will report in detail:

1. A statement of training/development objectives and a rational for their selection. This should include a discussion of relevant literature citations in relation to the objectives (if they exist), and a description of how the objectives reflect both the research questions and findings and the research processes in which the team has been engaged.

2. A description of the training/development program materials and activities. This should identify and describe specific training/development activities and/or materials carried out relative to each objective; describe the sample of teachers involved in the training, and how they were selected (criteria and process); present the training sequence and schedule; describe the training process (who did what, when); and describe processes used to establish reliability of materials and processes used.

3. A description of evaluation of the training/development. By objective, this should describe how each was evaluated, including a description of the procedures and processes used.

4. A discussion of the results of training/development and implications and recommendations for future replication. This should reflect evaluation of training/development objectives, particularly as they effect changes in the participants and their behavior. In addition, a statement of implications for future replication of the training and appropriate recommendations for same should be included.

Although the trainer/developer is expected to assume leadership in this activity, it is expected that all team members will participate and contribute to the Final Report of the Training/Development. This will ensure inclusion of teacher and researcher perspectives as well as those of the trainer/developer in relation to the results of training.

The Final Report of the Training/Development is due to FWL no later than November 30, 1978.

IV. DELIVERABLES

	Deliverable	Due Date
1.	Input for Implementation Study	As recorded*
2.	Response to NAP Comments re Training/ Development Design	June 30, 1978
3.	Final Report of the Research	Nov. 30, 1978
4.	Final Report of the Training/Development	Nov. 30, 1978

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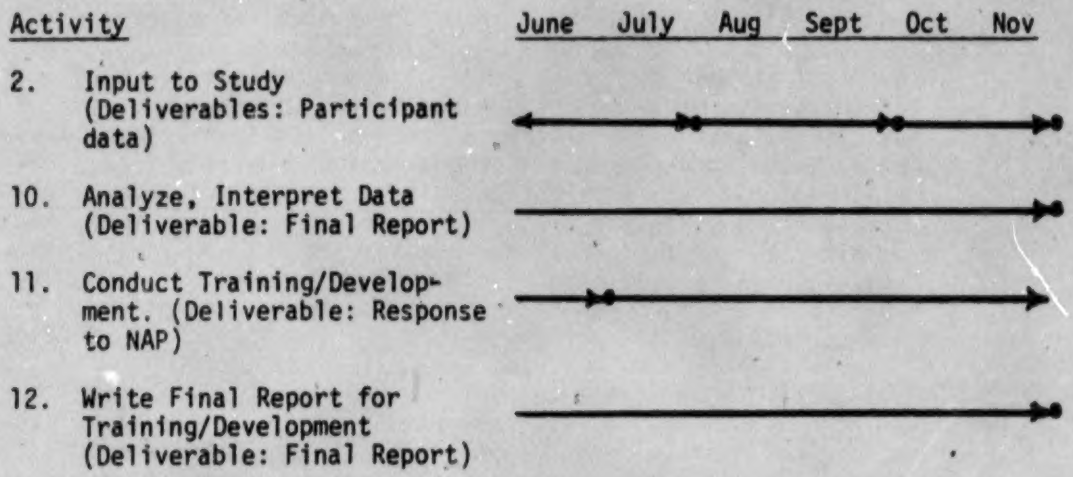
* Implementation Study input is an ongoing procedure with which IR&DT team members are familiar. It is expected that such input will continue during Phase III.

V. TIMELINE



2. Input to Study (Deliverables: Participant data)

10. Analyze, Interpret Data (Deliverable: Final Report)

11. Conduct Training/Development. (Deliverable: Response to NAP)

12. Write Final Report for Training/Development (Deliverable: Final Report)